The DRUG and COSMETIC INDUSTRY

APRIL 1937

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The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer; Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 101 West 31st St., New York, N. Y.

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FRONT COVER

Under the name of Ma-huang, species of Ephedra have been used as a medicine in China for thousands of years. The introduction of its alkaloid, Ephedrine, into Occidental practice came much later, but its use as a remedy in the treatment of various congestions, such as common colds, hay fever, etc., has been gaining in renown. It is still, however, to ancient China that the Occidental world must look for the raw material from which Ephedrine is made.

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JOSEPH KALISH, Chemist
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HARRY G. KELBLY, Circulation Manager
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NO DIFFERENCE

THAT the Federal Trade Commission is not much different than the Food and Drug Administration in enforcing the laws which come under its jurisdiction has been previously pointed out. Now we wish to give another indication of this lack of difference between these two departments by quoting a statement contained in a stipulation recently signed by manufacturers of cosmetics.

THE statement is: "The human body is nourished or fed only from within the body and there is no substance known to medical science which can feed or nourish the skin when applied externally, according to the agreed statement of facts."

QUITE a broad statement. Kind of reminds us of the kind of statements which used to emanate from Dr. Durrett when he was running riot as Chief of Drug Control. And consider further that these stipulations were principally with reference to lipstick for which nourishing value was claimed causing the lips to become smooth, moist, velvety, or non-greasy in appearance.

UPON what does the Federal Trade Commission base such a broad statement as this? Has the Commission no knowledge of such things as skin absorption, the healing of wounds with cod liver oil or vitamins A and D which give far better results when applied externally? Does not the long use of linseed oil and the more recent use of vitamin F on the skin mean anything to the Commission?

ALL of which proves that if the Federal Trade Commission gets further control of advertising, manufacturers are going to suffer plenty of headaches. If this power is granted to the Commission, manufacturers will have to develop real clinical evidence to back every claim that is made in advertising. Further it means a long road is ahead before manufacturers are able to impress the Commission with facts that are quite obvious to almost everyone else. The Commission apparently is going to take the course of making broad and general statements and then making the manufacturers carry the battle to the Commission to obtain exceptions.

NEW and NON-OFFICIAL

NO LESS THAN THIRTY-TWO STATES now have fair trade acts, indicating the extent to which this movement has gone. Unfortunately, the Miller-Tydings Bill has been delayed and therefore it is difficult for the smaller manufacturer to operate under all these state acts as it involves domestication in each of the thirty-two states.

With the highest court in New York State reversing itself and declaring the fair trade act of that state valid, the cloud of unconstitutionality of these fair trade acts under state constitutions has practically disappeared. While it is true that each state must declare for itself whether or not the fair trade act is at variance with the state constitution, the New York reversal leads most people to believe that there will be little trouble in this direction.

There has been some delay in getting contracts out, but this movement should gain momentum easily. Most manufacturers realize that the thing must be done, and they are at work on it. While manufacturers will send contracts to all known distributors of their merchandise, it is only necessary that one of these contracts be signed in each state. After that it is up to the manufacturer to notify each and every distributor as to the prices in effect. This might prove to be some job in cases of manufacturers who do not have complete lists of all retailers who are actually selling their goods. This is just another angle of the problem that will take a little time for manufacturers to solve.

Our Family Album

A rare example of advertising in the old days. We especially like the cross-breeding of the baby and the pig, as well as the slogan "No Cure, No Pay".

THE OUTLOOK FOR THE COPELAND BILL is confusing. Passage of the bill by the Senate was generally anticipated and this in no way increases the chances of the bill becoming law. The House was the place where the bill was defeated in the last Congress and there is no guarantee that the House will not kick up again. Furthermore, there is the possibility that the Administration might have greater control in the House and might again seek to undermine Senator Copeland's efforts to be the father of this bill. It is certain that the House will seek to embarass Senator Copeland by making many changes in the bill, if they do not entirely rewrite it.

Also there are no indications that the battle between the FTC and the FDA for control of advertising under the bill has been settled. The House can be expected to find great support for the FTC among its members as it did in the past. It appears that the fate of the bill rests largely in the hands of the President himself since he could probably settle the dispute between the two government departments, and he probably could bring the House sufficiently into line to pass the bill. However, with the President staking his reputation upon the Supreme Court issue, and trying to bring Congress into line on this, he might be unwilling to try to line the Congress up on other measures of lesser importance.

THE RECENTLY CREATED BOARD of Standards of the Toilet Goods' Association is starting to accumulate data regarding some of the new ingredients of cosmetics. In a communication to manufacturers the Board asks for information regarding vitamins in cosmetics, with particular stress upon vitamins D and F; hormones, and use of irridation in manufacture of cosmetics.

The Board, under the directorship of H. Gregory Thomas, has its work cut out for it for the reason that it has picked out ingredients regarding which there is not at present a great fund of knowledge. Also there are many who have not thoroughly studied these ingredients who are apt to belittle their use without proper study.

We have talked with several people interested in some of these ingredients and have been shown much proof regarding their efficacy. Unfortunately there is the matter of competition which causes those not as yet using these new ingredients to go to great length to damn them—the Board must be careful of giving too much weight to this sort of opinion.

These new ingredients must be given a

fair hearing. Convincing proof can doubtless be obtained to prove whether or not these products have a place in cosmetics. It is up to the Board to keep its feet squarely on the ground and not be swayed by emotions. Merely because a manufacturer discovers some new ingredient which imparts unusual properties to a cosmetic, is no reason to consider offhand that he is trying to besmirch the industry or make a racket of it. There are always those who, in their envy, believe that it is wrong to make an outstanding success and a great deal of money by some new and untried route.

PERHAPS THE MANUFACTURERS of toilet preparations got what they wanted from the fair trade practices conference which they held with the Federal Trade Commission and perhaps they did not. But at any rate they now not only know the opinion of at least a majority of the five members of the FTC regarding P. M's. and demonstrators under the Robinson-Patman Act, but they also know that P. M.'s and demonstrators are now considered entirely illegal under the Federal Trade Commission Act.

The Commission has paid little or no attention to the opinion of those attending the conference. It will be recalled that the conference failed to adopt a rule by which P. M.'s became illegal whenever used. Yet the FTC has included this rule in the set of rules as approved by the Commission. Through these rules, the Commission states, in effect, that P. M.'s and demonstrators have been illegal as long as the FTC has been in existence since they now seek to invalidate these practices through the Federal Trade Commission Act—the very law which created the FTC itself.

But from the conference and the submission of these rules to the industry, we do not see that the industry has learned anything which it did not already know. For the Commission expressed the opinion that these practices were illegal when it brought suits against Bourjois, Coty, Elmo, and others. The industry will not know whether or not the Commission is right in these suits until the Commission has ordered cease and desist orders, and these orders are appealed by the manufacturers to the U. S. Supreme Court. Therefore, the rules submitted by the Commission can not be accepted by the industry as final for about two years, at which time the courts will have ruled upon one of the cases involving these practices.

IGNORANCE OF COSMETICS by the FTC is bad enough, but wild statements by a member of the Cosmetics Committee of the A.M.A. are worse. And now Dr. Joseph Jordan Eller, New York dermatologist and member of the committee, writes in the February *Hygeia* that "Many persons show a sensitivity to orris root, which is a frequent ingredient of face powder. This should be eliminated from powders which are sold for general use."

Not Growing Very Fast

The fact that *Hygeia* is the consumer magazine published by the A.M.A., together with the fact that Dr. Eller is supposed to know about cosmetics, makes this statement doubly dangerous to this industry. The fact of the matter is that orris root has long been discarded by cosmetic manufacturers since they have long known that "Many people are sensitive to orris root." But anyone who says that orris root is "a frequent ingredient of face powder" is not acquainted with the facts. One of the largest and finest allergy clinics tells us that orris root is such a dead dog, allergically speaking, that the clinic has almost forgotten its existence.

Prominent formularies such as Chilson's *Modern Cosmetics* and Goodman's *Cosmetic Dermatology*, fail to include orris root as an ingredient of face powder. However, there is no doubt that publication of such statements would greatly strengthen the position of the A.M.A. Cosmetics Committee and would scare people into believing that the A.M.A. approval was essential in selection of cosmetics.

THE LEA BILL TO CONTROL ADVERTISING of drugs and cosmetics, as well as of devices and foods by the Federal Trade Commission has been revised by Representative Lea of California and again presented in the House. This bill represents a flank attack by the FTC upon the Food and Drug Administration which is also after advertising control of products regulated by the proposed Copeland Bill. Nobody seems to know what the chances of success of this bill are. If it passes anywhere it will pass the House first since the House has always favored the FTC for this power. However, the whole matter of a new Food, Drug and Cosmetic Act is clouded over by the many factors involved. At the moment the situation is so confusing that there is no way of telling what might happen.

One fact that is quite certain is that Senator Copeland is not in right with the powers of the Democratic party and every effort will be made by the party to thwart the Senator's ambition.

THE NEW YORK TIMES, THURSDAY, MARCH 11, 1937.
"The Consumer
will NOW decid
1. You will find price-fixed
in Macy's identified in this
Mineral Oil Preparations
Vitamin Products
Cod Liver Oil Preparations
Laxatives and Lubricants
Antacids and Digestants
Dentals and Hair Preparations
Household Necessities
Petroleum Products
Cough Syrups
First Aid
for your
medicine chest
MACY'S
TESTED DRUGS
Your medicine chest needs can best be filled from our wide, thoroughly tested and quality proven assortment of more than 650 items bearing the Macy label. Be ready for an emergency—Macy's Drugs can stand in good stead until the Doctor comes. Because each of these top flight, tested drugs carry Macy's label, each is priced low for cash. Listed here are four a few of the most popular sizes.
Aspirin tablets—bottle of 100 34c
Mathes Liver Oil Capsules —box of 100 79c
Cod Liver Oil, U. S. P. 16 oz. bottle 43c
Syrup of Wild Cherry Concocted for cough —10 oz. bottle 63c
Milk of Magnesia, U. S. P. —10 oz. bottle 18c
Mineral Oil, U. S. P. 16 oz. bottle 39c
Shaving Cream (plain) Giant Tube 19c
Vitamin Iodine—4 oz. 22c
MACY'S TESTED DRUG DEPT.
Street Floor
We sell only for cash. Resulting economies including efficiency and volume zone, one automatic, six per cent. We endeavor to have the prices of our merchandise reflect this saving, subject to limitations over which we have no control.
W YORK TIMES, THURSDAY, APRIL 1, 1937. L+ 7
"THE CONSUMER WILL NOW DECIDE"
Take your choice of these good
ASPIRIN TABLETS
ASPIRIN TABLETS
MACY'S ASPIRIN TABLETS
MACY'S OWN
1. In this bottle are 100 "five-grain" tablets containing a well-known brand of the drug Acetylsalicylic Acid.
This drug is commonly called "Aspirin." Doctors and many laymen are familiar with its properties.
No magic, simply strict skill, is involved in its proper making.
Such tablets are made by pharmaceutical houses of high standing. They are made to comply with the requirements set forth in The National Formulary. And the aspirin contained in each tablet is carefully made, of first-grade ingredients, to conform to the requirements for purity set forth in the United States Pharmacopoeia.
Scientific analysis (made by Macy's Bureau of Standards, and by a reliable outside laboratory) of such tablets indicates that the average weight of each tablet is 6.22 grains; that the average amount of aspirin in each tablet is 5.13 grains.
Analysis further indicates that the balance of matter in each tablet—the "vehicle" which "carries" the aspirin is free from harmful and deleterious substances.
Analysis further indicates that the average time required to disintegrate one of these tablets (in distilled water at 25° centigrade) is from 7 to 35 seconds, according to the method applied.
This brand of aspirin tablet has been price-fixed by its manufacturer under the New York State Feld-Crawford Law.
ITS FIXED RETAIL PRICE
for a bottle of 100 tablets is
?
No retailer in New York State may legally price this brand for less.
Macy's has this sound aspirin for those who want it.
• ASK MACY'S, OR ASK ANY DRUGGIST, TO TELL YOU HOW MUCH THE FIXED PRICES OF ASPIRIN ARE TODAY.
2. In this bottle are 100 "five-grain" tablets containing the Macy brand of the drug Acetylsalicylic Acid.
This drug is commonly called "Aspirin." Doctors and many laymen are familiar with its properties.
No magic, simply strict skill, is involved in its proper making.
These tablets are made by a pharmaceutical house of high standing. They are made to comply with the requirements set forth in The National Formulary. And the aspirin contained in each tablet is carefully made, of first-grade ingredients, to conform to the requirements for purity set forth in the United States Pharmacopoeia.
Scientific analysis (made by Macy's Bureau of Standards, and by a reliable outside laboratory) of these tablets indicates that the average weight of each tablet is 6.14 grains; that the average amount of aspirin in each tablet is 5.09 grains.
Analysis further indicates that the balance of matter in each tablet—the "vehicle" which "carries" the aspirin is free from harmful and deleterious substances.
Analysis further indicates that the average time required to disintegrate one of these tablets (in distilled water at 25° centigrade) is from 7 to 35 seconds, according to the method applied.
This aspirin tablet, "Macy's Own," is of course, NOT price-fixed. It is "price-free."
ITS RETAIL PRICE IN MACY'S
(which includes a profit to Macy's and to the manufacturer) for a bottle of 100 tablets is
18 cents
Macy's has this sound aspirin for those who want to "save with safety."
MACY'S DRUGS
STREET FLOOR, 34th STREET & B'WAY, N. Y.
Macy
possible asso
We believe that the
our own brands, and on other
FREE merchandise, alongside high-price-
fixed brands, will tell its own eloquent story
MACY'S
34th ST. & BROADWAY, NEW YORK

The advertisement at the left, promoting Macy's entire drug line was run on March 5, five days before the New York fair trade was declared valid. The advertisement in the background was run on March 11, the day after the law was validated. The Aspirin advertisement was run on April 1. Close inspection of the March 5 advertisement will show the price of Aspirin tablets at 14 cents per hundred, while the April 1 advertisement shows the price at 18 cents per hundred, showing that Macy used the Feld-Crawford Act to increase the price on their own item by 28 per cent.

FIXING THE PRICES

Macy in New York fights back at price maintenance in a ruthless manner, while a retail organization insists that manufacturers cut their prices.

With New York State's highest court—the Court of Appeals—reversing its former decision and declaring the Fair Trade Act of that state valid, the price maintenance situation throughout the country has taken on a new significance. With the New York State court reversing itself out of deference to the U. S. Supreme Court's interpretation of its own previous decisions, it is unlikely that any of the other state courts will rule adversely on this type of law when it comes before them.

Further, the fact that there are now no less than thirty-two states that have enacted these fair trade acts. This gives some indication of the extent to which the movement is sweeping the country. And because the New York law now makes it imperative for R. H. Macy & Company, to sell at suggested minimum prices, the interest in price maintenance laws has greatly increased. For Macy is known by retailers all over the country as the one outstanding price-cutter, and if such a law can control Macy's price-cutting activities, the respect for these laws will mount sharply.

But Macy is not giving up the fight gracefully. They have openly opposed all efforts at price maintenance legislation, and they are not going to take a licking sitting down. Consequently they have retaliated by the methods shown in the accompanying advertisements. One of the methods calls for a sticker to be attached to price-maintained merchandise bearing the legend "Price Fixed by the Manufacturer or Wholesaler under the Feld-Crawford New York Law," and a label attached to Macy's private brand merchandise bearing the legend, "Macy's Own, Why Pay More?" Another goes further and openly compares products under Macy's label with nationally advertised products such as Aspirin shown here. While Aspirin is a U.S.P. product that can be compared fairly well, and since Macy does not advertise the name of any manufacturer's goods with which they made a comparison, they are probably upon safe ground, but the inference that trade-marked articles also are duplicated in the same way by Macy is very strong.

An interesting fact regarding the Aspirin advertisement is that the price is given at 18 cents per bottle of 100 tablets, while in the advertisement for their entire drug line—which advertisement appeared about a week before the New York was declared valid—the price for the same package was given at 14 cents. Therefore, Macy has advanced its price on this item by twenty-eight per cent. since the New York price maintenance act was declared valid. This indicates either that Macy is going to make more money on its own merchandise under the price maintenance act, or that they are going to spend money in advertising their products and do a job of merchandising them at the expense of nationally advertised goods.

The Aspirin advertisement states that the price of 18 cents allows a profit for the manufacturer and a profit for Macy, thereby informing the public that Macy does not make Aspirin tablets in their own laboratory, and attempting further to point out the enormous cost of distribution of drugs through channels other than Macy. There is no mention made of the fact that Macy's Aspirin formerly sold at 14 cents per package, nor is there any mention made of the fact that Macy for years sold over their counters goods of nationally advertised drug products at prices which represented cost or less than cost to them.

Macy's tactics are of the most dispicable type. As a retailer whose quarrel is truly with other retailers who have brought about the price maintained state of affairs, they are determined to carry the fight to manufacturers who insist upon stabilized prices. While the retailers are the ones who have brought about the laws, Macy evidently considers only the fact that the laws are of a voluntary nature and they are attempting to smear manufacturers in an attempt to undermine the laws by threatening manufacturers who issue contracts and thereby hold Macy to firm prices. Macy realizes that they cannot change the laws by working directly on other retailers, so they pick upon manufacturers.

The question has arisen in manufacturing circles as to how far Macy can go in their fight upon manufacturers.

If one will visit the Macy store and go through their drug and cosmetic departments, he will see mostly Macy goods displayed, but he will also see nationally advertised goods displayed in a rather disadvantageous fashion. The products of national advertisers who are maintaining prices upon their items, are placed upon a placard which announces in large type that the item is selling at a price fixed under the Feld-Crawford Law. In several instances Macy goods of the same type are placed immediately alongside of the nationally advertised goods, and are placed upon a placard telling that the items are not selling at a fixed price. Every nationally advertised product which is selling at a stabilized price carries the label informing the purchaser that the product is fixed in price by the manufacturer or wholesaler under the Feld-Crawford Act.

Since the validity of the fair trade acts under the decision of the U. S. Supreme Court hinged solely upon the proposition that a retailer had no right to damage in any way the property rights which manufacturers had in their trade-marks, it seems to some manufacturers that Macy is over-stepping the mark in attaching to the package any label, which by inference, indicates that the manufacturers price is too high. Naturally the public was not aware of the fact that Macy has long sold these same products at prices which did not represent profitable transactions to Macy. Therefore, these labels might implant in the mind of the average consumer the thought that the fixed retail prices are altogether out of line and that the manufacturers prices are now high and include too large a margin of profit for the manufacturer.

Everyone connected with the industry understands that manufacturers' prices have not changed and that the retail prices are only being brought up to levels which will mean a profit instead of a loss to all retailers. But it certainly seems that Macy, by attaching these labels to trade-marked products of manufacturers, is operating in such a way as to injure the trade-mark rights of these manufacturers. The U. S. Supreme Court clearly stated that goods bearing a trade-mark could not be handled by a distributor in any way as to injure the property right which the manufacturer has in his trade-mark. It stated that, even though a distributor might buy the goods from the manufacturer, so long as the goods carried the trade-mark of the manufacturer, they must be handled—at least with regard to price—in the manner dictated by the owner of the trade-mark. It does not seem that if the retailer is to be restricted from damaging a trade-mark by quoting prices lower than the manufacturer specifies, that he should have any right to damage the trade-mark by applying to the very product itself a sticker which indicates that the manufacturer has forced a retailer to raise his price. Certainly it would seem that such a step could have no other effect than damaging the trade-mark rights of the manufacturer.

It seems that a case should be brought upon this point so as to determine what rights the retailer has in protecting his own business, especially when any steps which the retailer might take act unfavorably upon the manufacturer's goods involved. While no one would attempt to say what the U. S. Supreme Court would decide under present conditions, it seems that this court, as well as other courts of the land, have recently taken a broader view with reference to protection of property rights in trade-marked items.

At the same time as Macy is carrying on its own battle against manufacturers and other retailers who favored this legislation, other retail organizations are attempting to offset the advances in retail prices by having manufacturers reduce their prices to the retailers. George Gottesman, president of the Consolidated Brooklyn Retail Pharmacists, Inc. recently made statement on this movement. He was very effectively answered by Herman L. Brooks, president of the Toilet Goods' Association, who sent the following letter to Mr. Gottesman:

"It was with considerable amazement and some concern that many members of this industry read in Tuesday's "New York Times" the announcement following the meeting of the Board of Directors of your organization, the opening paragraph of which was:

> "Lower prices to consumers from manufacturers of branded goods 'believed over-priced' under the Feld-Crawford Bill will be sought by a committee of the Consolidated Brooklyn Retail Pharmacists, Inc., it was announced yesterday following a meeting of the Board of Directors of the organization at the Hotel Bossert, Brooklyn. The association comprises 1200 to 1500 retail druggists in the borough, according to Percy Goldman, Vice-President, who made the announcement.

"It is possible that you have in your minds merchandise other than cosmetics and toilet articles. If such is the case, we shall be somewhat relieved, but nevertheless, the same principles are involved, for to give the impression that prices are too high because of Fair Trade legislation will defeat the very purposes for which this battle has been so long waged, and finally so successfully concluded.

"Furthermore, announcements of this kind, emanating from retail druggists, for whom the fight was carried on primarily, will afford ammunition to those very retailers who have and still are appealing to the public, pointing out to them what they think are the damaging effects of Fair Trade legislation.

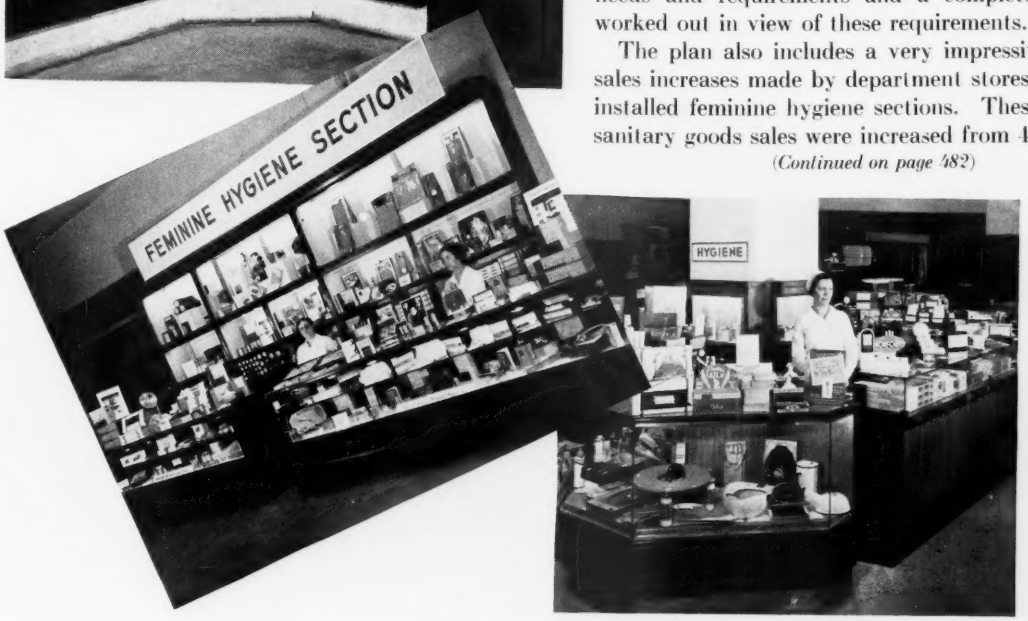
"The press reported that "a committee has been appointed to contact manufacturers whose merchandise they believe is over-priced." It is not with any fear in mind that such is the case in this industry that we make the following remarks:

"Do you recall, as I am sure you must, that the opponents of these Fair Trade Laws constantly used the arguments in the debates before the New York State Legislature that nationally advertised and trade-marked articles were already over-priced, to which the invariable reply was that all of these goods were being sold in a strongly competitive market, and that any

(Continued on page 503)

FEMININE HYGIENE IN THE DEPARTMENT STORE

THE toilet goods department of the department store is rapidly becoming an important factor in the merchandising and distribution of products included in the feminine hygiene group. This development is important to manufacturers of products in this group who will want to adapt sales programs and policies to include this new factor. It is also a completely logical turn of events, in view of the tremendous growth of this market and particularly in view of the fact that the products of this group have achieved what amounts to universal acceptance among modern women. The surreptitious, almost guilty, air with which they were formerly bought and sold is becoming a thing of the past and in view of this increased acceptability and respectability, it is logical that more and more of the better department stores are making real efforts to exploit this market through the ready channels offered by their toilet goods departments.



This development is currently being given considerable impetus by International Cellucotton Products Co., makers of "Kotex." This company is approaching the department store market with one of the best-worked-out sales plans we have ever seen. An intelligent study has been made of the department store's needs and requirements and a complete sales plan worked out in view of these requirements.

The plan also includes a very impressive record of sales increases made by department stores which have installed feminine hygiene sections. These show that sanitary goods sales were increased from 45 to 100 per

(Continued on page 482)

THE MEDICINAL TREND

A sharper upward trend has taken place in ethical medicines than in proprietaries, with the volume of ethicals leading that of proprietaries.

TRENDS in medicinals are clearly indicated by the census report of manufacturing in this industry released last month by the Department of Commerce. The movement toward greater use of ethical preparations is shown by the fact that the total value of ethical products is now greater than that for proprietaries, and also by the fact that production of ethical products is advancing at a more rapid rate than production of proprietaries is advancing.

Another interesting fact indicated in the report is that the value of vitamin products and glandular products produced were about equal for the year 1935. Another interesting fact is that ethical products produced are about one-third U.S.P. and N.F., and two-thirds special formulas indicating the extent to which detailing by manufacturers on improved products has been successful. This also indicates the size of the task undertaken by professional pharmacy in its effort to increase prescribing by physicians of official products.

An increase of 15 per cent. was registered in 1935 as compared with 1933 in the value of druggists preparations and proprietary medicines. Total for 1935 was $291,733,473, and for 1933, $253,947,350.

Figures given in the report indicate that ethical products sold direct to or prescribed by physicians total $145,742,931, of which $12,851,547 were biologics. This total of ethical preparations compares with a total of $122,349,416 for proprietary medicines, showing clearly that the business in ethical medicines now exceeds that of proprietaries.

Further the figures indicate that the rate of growth of ethical medicines is much sharper than that of proprietaries, for production of ethical medicines increased by 20 per cent. from $121,163,709 in 1933 to $145,742,931 in 1935, while proprietaries increased only 11 per cent. from $111,893,950 in 1933 to $133,891,384 in 1935. The increase in the biologic group was very high registering 39 per cent. as the value advanced from $9,269,759 in 1933 to $12,851,547 in 1935.

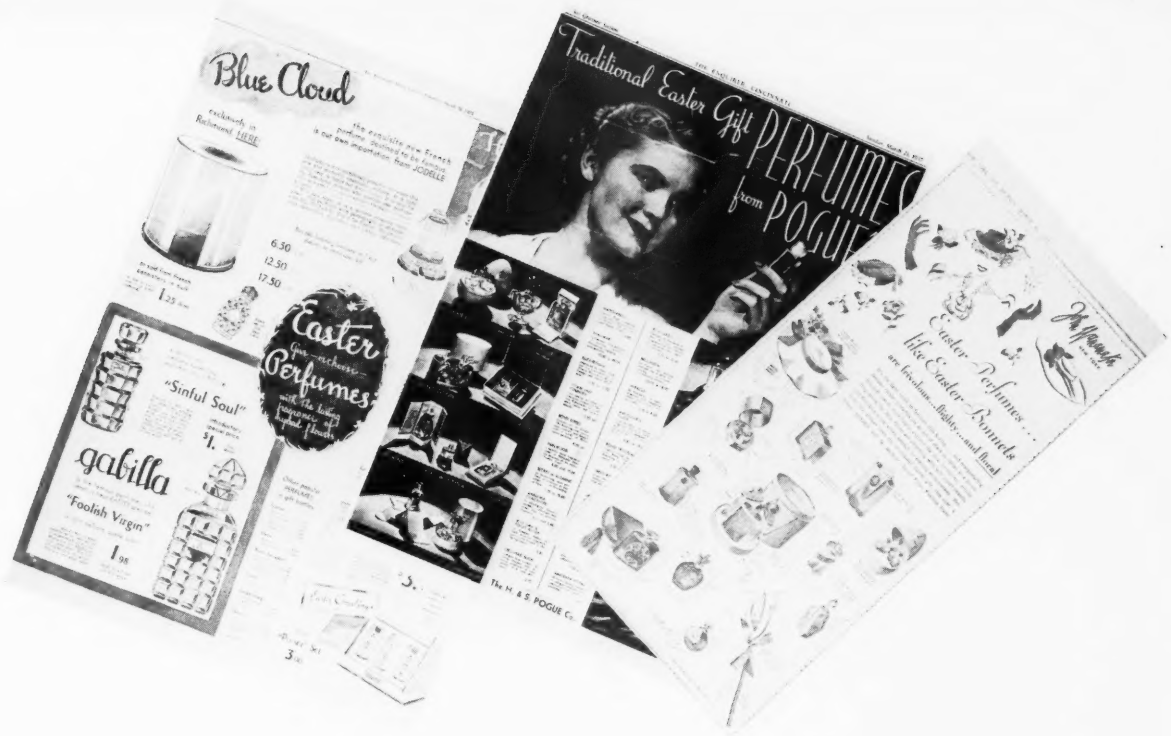
Revealed in the figures given for ethical medicines is the fact that U.S.P. and N.F. products represent only about one-third of the total, while ethical specialties represent the other two-thirds, with two exceptions—gland products and vitamins. In the case of gland products, official preparations and specialties divide the market equally, while in the case of vitamin products official products account for only 21 per cent. of the market.

The figures given for these groups are: Liquid preparations—tinctures, fluid extracts, elixirs, solutions, U.S.P. & N.F. $9,932,642, special formulas $18,443,511; Dry preparations—pills, tablets, powders, salts, U.S.P. & N.F. $8,311,647, special formulas $20,702,889; Ointments, cerates, suppositories, globules, U.S.P. & N.F. $2,287,545, special formulas $4,519,395; Pharmaceutical metals and their salts—bromides, citrates, bismuth, etc. U.S.P. & N.F. $1,089,664, special formulas $2,625,640; Gland products U.S.P. & N.F. $5,514,098, special formulas $5,335,528; Vitamin products U.S.P. & N.F. $1,753,980, special formulas $6,295,404.

The totals of the products of the U.S.P. & N.F. classifications were bolstered somewhat by official preparations which were packaged specially for sale to the public rather than for use on prescriptions or by dispensing physicians. These total were: Liquid preparations $4,858,503; Dry preparations $3,559,468; Ointments, cerates, suppositories, globules $2,781,466; Pharmaceutical metals and their salts $9,506,039; Gland products $513,384; Vitamin products $1,336,569.

Liquid preparations and dry preparations account for the major classifications in the proprietaries, with values of $35,792,763 for liquid preparations, and $33,500,222 for dry preparations. Ointments, cerates, suppositories, globules come next in proprietaries with $10,714,410, followed by vitamin products $2,151,129, gland products $415,709, and synthetic medicinals $151,204.

Total production of products given by injection other than biologics, totaled $10,520,775 during 1935, of which $1,301,597 was for arsphenamines, $5,177,692 was for other U.S.P. products, and $4,042,486 was for special formulas.

(*Continued on page 492*)

TOILETRIES FOR GIFTS

THE Easter season which has just passed was marked by unusual activity and unusually high sales volumes in cosmetics and perfumes. More manufacturers and more retailers seemed alive to the fact that the Easter season is a gift season second only to Christmas; that cosmetics and perfumes make ideal gifts; and that planned and intelligent merchandising is all that is necessary to make the consumer conscious of this.

The volume of newspaper advertising on cosmetics and perfumes for Easter exceeded by far that of any previous years. Both manufacturers and retailers seemed to extend themselves to link Easter with cosmetic and perfume giving. There was a noticeable increase in window displays and in promotions by retailers. And on the part of the manufacturer there was more attention given to packaging and more to stressing the obvious gift acceptability of standard merchandise.

The result of these individual efforts all along the line was a cumulative pressure on the gift market which resulted in the biggest Easter volume for years in cosmetics and perfumes. And signs are already evident that, having tasted of the fruits of the gift business, alert merchandisers are making plans now to keep after it on Mother's Day, Father's Day, Graduation Day and the other special gift occasions which will be coming along, as well as on the regular gift occasions, like birthdays, weddings and anniversaries which occur every day in the year. They seem determined that there be no more of the long, lean months waiting for the Christmas season to come around.

That this sentiment predominates has been proven by responses *Toilet Requisites* has been receiving from a campaign started in its February issue to make the industry conscious of the tremendous gift market which was, for the most part, being neglected. With the rallying cry, "Why Not Give Perfume!" that publication called the industry's attention to this wasted opportunity, pointed to the florists as a shining example of what could be done, and then called for response and action.

Both were not long in coming. In the March issue and again in the April issue, that publication printed letters from manufacturers, importers, retailers, buyers,

beauty editors, salesgirls and others voicing their enthusiasm and their ideas. Apparently, when *Toilet Requisites* called attention to the tremendous gift market and pointed out that the industry had failed to exploit that market intelligently, it was only saying what a great many others were thinking.

Even in the face of already existing demands on the industry, the letters which have been printed in the March and April issues of that publication indicate that many have taken kindly to the idea of a cooperative promotion, publicity and advertising campaign to dramatize the gift appeal of this industry's products. Several make the concrete proposal that a committee be formed to consider ways and means of organizing and financing such a movement.

But the most encouraging thing, as the Easter season indicated, is that alert manufacturers and retailers are not waiting for the possible organization of a cooperative movement. While they admit that to be the ideal way to do the job, still they realize that a great deal can be done as individuals.

The simple facts of good merchandising are encouraging more and more retailers to go after the gift market in their own communities. The more a retailer of this kind does on his own initiative, the more willing he finds the manufacturer to cooperate with him. And the more an alert manufacturer does to direct his merchandising and advertising at the gift market, the more willing he finds the dealer to cooperate. Furthermore, the success of one manufacturer encourages another and the success of a neighbor, encourages more retailers to make their drives on the gift market.

These individual efforts on every side cannot help but have a pronounced effect upon public consciousness. Even without a cooperative program, they will accomplish a great deal in securing a logical share of the gift market. With such a program, taking advantage of this aroused consciousness, a market for five, ten or even twenty times the present volume is not outside the realm of possibility.

This much at least is certain. An intelligent program designed to exploit the gift market is an obvious way to raise the valleys in the sales curves of cosmetics and perfumes. Though it is obvious, it remained for *Toilet Requisites* to focus attention upon it. The articles and letters on the subject, which have appeared in its pages since February, are of interest to and should be studied by every manufacturer of cosmetics and perfumes. THE DRUG AND COSMETIC INDUSTRY is completely convinced of the soundness of the idea and is utterly committed to it. There are holiday and gift occasions aplenty to make the cosmetic year look like Christmas every month.

Feminine Hygiene

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cent., and rubber goods from 400 to 700 per cent. But for most manufacturers, increases in sales of feminine antiseptics of 500 to 800 per cent., and increases in deodorants and depilatories of 40 to 500 per cent., are the most interesting figures.

Feminine hygiene has been estimated as a $200,000,000 business. Whether or not this figure is approximately accurate, manufacturers who are marketing products in this category know that the business is already tremendous, that the demand is growing by leaps and bounds, and that, potentially, the market includes practically all women. The development of the toilet goods department of the department store as an important factor in distribution will be watched with interest for it is a further advance in making the products easy to buy, places them in an atmosphere which commands respect, and brings to their aid the high type of trained selling which is characteristic of the toilet goods department.

Discussing this phase of the situation, TOILET REQUISITES states, in its April issue, that, "for a great many years now, women have depended upon the trained salesgirl for very personal advice on the care of skin and hair and the problems of good grooming and personal appearance generally. Salesgirls in the toilet goods department have studied and have become expert in this very delicate matter of giving confidential and intimate personal advice to their clients. It is very natural, therefore, for women to come to this same source, to the toilet goods department, for advice on feminine hygiene which they now recognize is a very important part of good grooming and good health."

The department stores which have installed feminine hygiene sections have found that this type of trained selling is the first requisite of success. It is essential that the section be a place where the discriminating women feels free to discuss her personal problems with a competent saleswoman. She is interested in the merchandise which is for sale in the section but may be reluctant to inquire about it or embarrassed at the thought of discussing it with anyone. She is afraid of unintelligent selling and hence, the character, conduct and approach of the saleswoman is a highly important factor in sales.

No one knows this better than manufacturers in the feminine hygiene field. Many of them have been conscious of the fact that the drug store is not always an ideal place for retailing these products because of the many uncontrollable factors which might make for embarrassment of the potential customer and result in lost sales. The entire atmosphere of the toilet goods department of a department store is certainly more favorable for encouraging feminine hygiene business than that of the ordinary drug store and as this merchandising development is extended, this fact should be clearly substantiated by rising sales figures.

THE RETAILER'S PRIVATE BRAND

Retailers are showing more interest in private brands than they ever have before. Perhaps it is because they fear that price maintenance will freeze prices at a level that will cut consumption or that, with national brands selling at minimum prices, their discount will be cut. Or, it may be that they fear that the enforcement of the Robinson-Patman Act will force many companies to broaden distribution, causing many leading retailers, notably department stores, to lose what has been a practical monopoly of the demonstration lines of cosmetics.

At any rate, many large retailers and retail groups, who have not heretofore given much play to private labels, are talking long and loud about what they are going to do with their own lines.

There is nothing new about the private brand. It is older than national advertising. Yet, rarely is it discussed dispassionately by the retailer and assigned to its proper place. It is either discussed wildly and violently as a threat to the national advertiser, as in the case of the head of a leading department store in Pittsburgh some months ago, or as a problem which holds no particular advantage for the retailer and which is not worth pushing or advertising, as in the case of a leading New York chain just the other day. Yet it must be apparent to any successful retailer that his success depends upon an adequate selection and stock in several different classifications. Without this selection, his store would be so devoid of service or attraction and he would quickly lose his trade.

In many cases, the coolness of the retailer to the heavily advertised brands lies undoubtedly in his fear of them as competitive loss leaders, to his feeling that, as a merchant, he can make a larger net on his own or other unadvertised items and to his resentment at having his store used merely as an automatic warehouse for the consumer. He cannot stem the tide of advertising demand. He can and does, in many cases, notably in the department store and chain field, divert a large part of this flow to his own interest. In the department store especially, the retailer has found that, if he so desires, trained, skilfull sales help can, to a considerable extent, divert and nullify a very large part of the effect of national advertising. But it would be very difficult for the retailer who takes a long, broad viewpoint to justify any effort on his part to block the direct action of advertising. He knows that most of the brands which, through mass advertising, have reached that enviable position where they have consumer demand, are largely staple service items. People drop into his store to pick up one of these specific items. They are unquestionably traffic builders.

During the last twenty years the trading area of large stores has increased considerably. Large cities draw trade from small cities which, in turn, find customers coming from towns and villages. That national advertising has played a part in this movement with the automobile and other social influences cannot be denied. No retailer can ignore this factor with safety. Tooth paste is a notable example of what national advertising can do. It has created for tooth paste a market of $30,000,000 in wholesale sales. The retailer has had little or nothing to do with the creation of this market in which he participates nor can he, from the nature of his business, be any considerable force in market development. But national mass advertising tends to standardize and stabilize. The advertised products can provide only part of the picture for the retailer.

It is in the group of products backed by very moderate advertising that the retailer finds his best opportunities for merchandising ingenuity. These are seldom beset by the troubles which haunt the retailer in the case of heavily advertised lines. The packaging and the products of moderately advertised lines are not so likely to be fixed or standardized. It is with them that the retailer gets an abundance of new or timely packages, of new products and new talking points. And it is here that dealer cooperation is more liberal and more directly tied to his store.

(Continued on page 503)

READING THE RIDDLE OF

ATTEMPT will be made, on the one hand, to satisfy complaints of alcohol industries and trades about difficulty in obtaining proper supplies of alcohol, and, on the other hand, the fears of government tax collecting officials about moonshining and bootlegging, in a general reorganization and revamping of the denatured alcohol set-up. This task has been undertaken by Dr. H. J. Wollner, consulting chemist to Secretary of the Treasury Morgenthau. Dr. Wollner planned a speech before the American Chemical Society annual meeting in April, at Chapel Hill, North Carolina, discussing the matter in some detail. He planned, following that, separate conferences with representatives of drug, cosmetic, chemical and other manufacturing and professional groups on details of the proposed new project affecting their respective interests.

Among those expected to cooperate with the Department in its effort to solve the riddle of alcohol are Dr. Martin H. Ittner, chairman of a special committee representing chemical manufacturers, and Dr. Harrison E. Howe, representing industrial chemical engineering interests. While it is reported that some of the alcohol interests originally may have been suspicious of the Wollner idea, yet the Treasury's consulting chemist now is understood to feel reasonably assured of cooperation of that group. A technical committee representing the Industrial Alcohol Institute conferred with Dr. Wollner about his reorganization plans on March 16.

Pending working out and announcement of details of the plan, Dr. Wollner has told the Drug and Cosmetic Industry that a new formula to take the place of specially denatured alcohol formula 23-G for use in rubbing alcohol would be authorized in early April. Wollner has been studying various aspects of the alcohol problem for many months, and he says frankly he does not expect to evolve a panacea for all the ills of the alcohol trades and industries within a few weeks. On the contrary, he believes that a year or two may be required for the complete working out of the ideas he has been discussing with trade representatives and others interested. Meanwhile, he says, however, he hopes it will be possible to reduce the number of denatured alcohol formulae from an approximately 100 to a total of 7 or 8. The Treasury Department has already made a beginning in this direction by revoking, effective May 1, 1937, specially denatured alcohol formulae 11, 26, 31-B and 31-C.

DR. WILLIAM LINDER OF F.A.A. CHEMICAL UNIT

Treasury officials admit that during the past 20 or 30 years there has been an accumulation of specially denatured alcohol formulae, not all of which are necessary. Actually, Dr. Wollner says, about 1,000 possible

ALCOHOL

By H. C. HALLAM

DR. H. J. WOLLNER REVISING FORMULAS

formulae or combinations of formulae could be used under the existing regulations and departmental rulings. He says there are about 4,000 concerns holding denatured alcohol permits from the federal government, and the total number of products made with specially denatured alcohol approximates 16,000 to 20,000. A special permit has been required to make each of these products. The delay, red tape, complications, dissatisfaction and unnecessary expense, both to government and industry, resulting from the working of the present set-up have been tremendous. These facts appeared, in part, in response to questionnaires sent out by the Treasury Department some time ago to the denatured alcohol permittees.

When Dr. Wollner took hold of the alcohol "hot potato," he found that more than one formula called for use of wood alcohol as a denaturant. He is sure that one such formula should be sufficient. In general his plan for changing and simplifying the situation contemplates evolving a small number of formulae, some of which perhaps may be varied slightly within a defined range and which may be used, each for the production of a certain class of products requiring denatured alcohol. Among the classes referred to may be mentioned drug, pharmaceutical and medicinal products; cosmetics, perfumes and toilet preparations; mouth washes, throat gargles and antiseptics; flavoring extracts, chemical products; paints, varnish and lacquers, etc. In some of these classes the alcohol is used in mixing, compounding or manufacturing; in others it is used primarily as a solvent, and may be recovered after use. Some products, such as drugs and medicines and flavoring extracts, are for internal use, while others are for external use only.

Dr. Wollner has found that although the administration of alcohol by the government was supposed to have been decentralized several years ago, yet in practice much of the work is still heading up to Washington. A manufacturer is one of the 15 supervisory districts under the Alcohol Tax Unit, Internal Revenue Bureau, applies to his district supervisor for a permit to make a product requiring denatured alcohol and to obtain the necessary alcohol. In many instances supervisors have not taken prompt and decisive action, and ultimately the manufacturer's application has had to come to Washington. Technically-minded experts or mere clerks in government bureaus there in many instances have objected to certain details of the applications, which have thereupon been sent back to the supervisors and by the latter to the applicants for correction or revision. By the time such matters are straightened out, months have passed, the results including loss of time and effort on the part of the applicant, possible loss of employment, wages, and revenue to the government and other objectionable conditions. On the other hand, according to Dr. Wollner, it has been possible in some instances for certain manufacturers to obtain special formulae for denaturing the alcohol they need, the result being multiplication of formulae and great similarity in some of them.

One Treasury Department expert asserts that all authorized formulae are used to a greater or lesser extent, although it is said in trade circles that about 20 of them are seldom if ever used. The Department admits it has found as little as one or two gallons of products made by some permittees.

One of the difficulties in working out suitable denatured alcohol formulae for use particularly in perfumes and toilet preparations is that denaturants must

not react unfavorably with other ingredients of the products concerned. Difficulty has been experienced, for example, with formula 38-B for use in making mouth washes and external lotions. The formula calls for use, as denaturants, of 10 pounds of certain essential oils and substances per 100 gallons of 190 proof ethyl alcohol. Among the denaturing ingredients mentioned is oil of bergamot. It is reported that addition of 10 pounds of this ingredient per 100 gallons of alcohol made the alcohol too strong in bergamot for use by perfumers. However, high officials of the Alcohol Tax Unit say that formula 38-B should not interest perfumers because it is intended for use in making mouth washes, antiseptic solutions and similar preparations. Furthermore, it is stated that no manufacturer has to use 10 pounds of bergamot oil but can mix bergamot oil with the other denaturing ingredients officially authorized up to a total of 10 pounds of denaturants per 100 gallons of alcohol. The denaturants authorized under this formula, in addition to bergamot oil, are as follows:

Camphor	Oil of pine or pine needles
Chlor thymol	Oil of rosemary
Eucalyptol	Oil of sassafras
Guaiacol	Oil of spearmint
Menthol crystals	Oil of thyme
Oil of Bay	Oil of turpentine
Oil of cassia or cinnamon	Oil of wintergreen or methyl salicylate
Oil of citronella	
Oil of cloves or Eugenol	Phenols
Oil of eucalyptus	Phenyl salicylate
Oil of mustard (volatile)	Safrol
Oil of peppermint	Thymol

It is reported that only six alcohol denaturants are officially authorized in Germany as against several times that number authorized in the United States. One official's reply to this criticism is that in Germany pure ethyl alcohol may be used for producing certain articles for which denatured alcohol is authorized in the United States.

There has been criticism of the Alcohol Tax Unit on the ground that quassin may not be used as a denaturant in the United States, although it is authorized in Canada. This is a bitter product obtained from quassia chips. The official explanation is that use of quassin is not necessary in this country because brucine sulphate, another bitter product, is used for denaturing purposes, particularly in formula 40, for perfumes. Government experts say that probably quassin is difficult to keep in solution, having a tendency to form a precipitate, which must be filtered out. Brucine sulphate, on the other hand, it is said, is not so active as quassin in uniting with other substances. Furthermore, officials say quassin could probably be removed more easily than brucine sulphate, thus permitting diversion of alcohol into beverage channels.

Another objection to quassin is that it imparts a certain amount of color to alcohol. While it is asserted in trade circles that such color is not objectionable, since essential oils to be added to the alcohol for making perfumes already have a similar color, yet it is the view of Treasury Department experts that users much prefer pure white alcohol, as nearly odorless as possible.

INTERNAL REVENUE COM. BERKSHIRE

There was considerable complaint some time ago about formula 39-A requiring the use of tertiary butyl alcohol as a denaturant, on the ground that it was difficult to overcome the effect of this ingredient in making perfume products. It was complained that when perfumes are imported into the United States in concentrated form and alcohol added in this country, the same fragrance cannot be obtained in such products as in the original products in France, owing to the American practice of using denatured alcohol. The official slant on this problem is, first, that use of denatured alcohol in perfume is not required in the United States, but ethyl alcohol may be used, if taxpaid; and secondly, that there is nothing in denatured alcohol used for perfume that covers or destroys the original perfume fragrance.

As for tertiary butyl alcohol, officials say that the formula requires only one-eighth of a gallon per 100 gallons of pure alcohol. Commenting upon this formula, an internal revenue official stated to The Drug and Cosmetic Industry that formulae 39, 39-A and 40 formerly required the use of isopropyl alcohol. The main ingredient in isopropyl alcohol, they assert, was tertiary butyl alcohol. Under the revised formula, in place of using isopropyl alcohol, a small quantity of tertiary butyl alcohol was provided for. It was explained that tertiary butyl would act as a marker, the presence of which could be easily determined by a simple test in case of an attempt to clean the denatured alcohol for

beverage purposes. Tertiary butyl cannot be easily taken out, it is stated. Use of this denaturant, it is asserted, did not change manufacturing conditions one bit.

In dealing with various phases of the alcohol problem the sciences, arts, professions, industries, and trades concerned have to contend with a large number and variety of laws and regulations, federal, state, and in some instances local. Results have appeared in complaints that it is more difficult sometimes now to obtain alcohol for legitimate purposes than it was before prohibition repeal. Federal government officials concerned say they cannot understand how this could be the case unless there may possibly be at certain times and in certain places a shortage of alcohol.

While Washington officials do not point a finger at state laws and regulations, yet certain members of the trade have found considerable difficulty in that direction. This seems to be particularly true as regards drug stores and perhaps other branches of retail trade in states having their own so-called liquor monopolies and liquor stores. The following states have liquor monopolies: Idaho, Iowa, Maine, Michigan, Montana, New Hampshire, Ohio, Oregon, Pennsylvania, Utah, Vermont, Virginia, Washington, West Virginia, and Wyoming.

Some state laws forbid drug stores to sell alcohol at all. In other instances state laws require a license to purchase non-beverage industrial alcohol, which cramps the style of druggists and others in the trade. In still other instances the retail druggist may purchase alcohol from the wholesaler only, and then only in containers of two gallons or more capacity, except that if he wants a very small quantity of alcohol for putting up a prescription, the druggist can buy a pint or quart bottle of alcohol at a regular liquor store. Again, one trade representative in Washington reports that no retailer in a number of states can sell more than one gallon of beverage alcohol in one container to any individual.

When one asks the remedy for such conditions in the states, the answer heard in federal official circles is: "Bring state laws and regulations into line with those of the United States Government." But is that a fair, reasonable and proper remedy? And is it possible of attainment? Naturally, the states might have something to say on that point.

The present federal government alcohol control set-up has many aspects and angles. The Internal Revenue Bureau and its Alcohol Tax Unit have jurisdiction over the collection of a $2 per gallon tax on ethyl alcohol, the issuance of permits for using denatured alcohol, and checking up on the production, distribution and use of alcohol to see that the tax is not evaded and that the denatured alcohol product is not diverted into beverage channels. Some of these matters have already been referred to. There still remain for consideration the jurisdiction and activities of the Federal Alcohol Administration and the Food and Drug Administration.

FAA has a system of permits for distillers, rectifiers, importers, and wholesalers of distilled spirits under which production, manipulation, importation and distribution are controlled. Under this system, it is claimed, the FAA exercises no control over alcohol for industrial use. Such use is defined by FAA Regulations No. 2 as including tax-free use by public agencies, scientific institutions, colleges, laboratories, hospitals; use of denatured alcohol; use of distilled spirits for experimental purposes and in the manufacture of medicines, pharmaceutical, or antiseptic products including retail druggists' prescriptions; toilet products; flavoring extracts, sirups, or food products; or scientific, chemical, mechanical, or industrial products, provided all these products are unfit for beverage use.

On the other hand, the FAA defines by Regulations No. 2 all other uses of alcohol as "non-industrial," among them being use for beverage purposes; in manufacturing, rectifying, or blending of beverages; in the preparation of food or drink by hotels or restaurants; for sacramental purposes, and finally "as a medicine." Sale of beverage spirits to druggists and others is subject to the FAA law. In putting up prescriptions, FAA officials say, their regulations permit a druggist to get ethyl alcohol only in one-gallon containers. If a druggist sells alcohol for beverage use, it is subject to FAA labeling regulations. The FAA regulations provide that distilled spirits in containers of a capacity of one gallon or less, except anhydrous alcohol and alcohol withdrawn tax free under internal revenue laws, is deemed to be for non-industrial use.

Bulk sales of beverage spirits may be made under the FAA law only to distillers, rectifiers, wineries, and bonded warehouses and similar establishments. However, bulk sales of alcohol for industrial use are permitted by FAA. Its Regulations No. 3 provide: "Distillers, rectifiers, and other permittees engaged in the sale or disposition of distilled spirits for non-industrial use shall not sell or otherwise dispose of distilled spirits in bulk (other than alcohol) for industrial use, unless such distilled spirits are shipped or delivered directly to the industrial user thereof."

If the alcohol producer or user succeeds in taking the Internal Revenue Bureau, Alcohol Tax Unit, and Federal Alcohol Administration hurdles, he is then confronted by the Food and Drug Administration, of the Department of Agriculture, provided his interest is in food and drug production. This interest of the Food and Drug Administration will be expanded to cover the field of cosmetics also if the Copeland food and drug bill becomes law. The present food and drug law and the new bill classify alcoholic beverages among the foods. As such, distilled spirits for beverage use is subject to FDA regulations regarding adulteration, misbranding, and labeling, with possible seizure, criminal prosecution, fine and imprisonment in the background for violators.

The same principles apply to drugs, medicinal products, flavoring extracts, and cosmetics or toilet preparations for which therapeutic claims are made. Alcohol content must be stated on the labels of drug prepara-

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BELLADONNA

COURTESY STAFFORD ALLEN & SONS, LTD.

WE HAVE always been rather fascinated by the name Deadly Nightshade, one of the many synonyms for belladonna. Other synonyms such as Devil's Cherries, Naughty Man's Cherries, and Devil's Herb are equally intriguing.

The plant Atropa Belladonna is native to southern Europe, extending thence to the Crimea, Caucasia and the northern parts of Asia Minor, although it is cultivated to some extent in England, France and North America.

About 1504 a book appeared in Paris titled the Grand Herbier, which carried the first authentic notice of belladonna. The effects of belladonna, internally, were subjects of treatises as early as 1760. The German botanist, Leonard fully identified its poisonous properties. The people in the plant's habitat, however, have ever been aware that all parts, even to the berries, were poisonous.

So far as is recorded, the first study concerning its local use in the eye is that of Himly of Paris, 1802, although country people in its habitat have known from all time that it possesses the power of dilating the pupil.

In physicians' practice belladonna has a more recent introduction, due to the commendation of the renowned pharmacist, Mr. Peper Squire, of London, who about 1860 commended belladonna tincture as the basis of a useful liniment, for the relief of neuralgic pains. The drug is now used chiefly in the making of the alkaloid atropine—which incidentally is now also being made from Stramonium. Considerable amounts of belladonna are now used in the making of plasters.

For a number of years there has been very great interest in the cultivation of belladonna in the United States. The results of all experiments show that a high grade of belladonna can be grown in this country. Plants cultivated in California are very rich in active constituents. Drugs are obtained for the most part from plants cultivated in the United States, Central Europe and England. Importations by the United States amount to approximately 190,000 pounds of belladonna leaves annually.

OINTMENTS, PASTES, CERATES

THE classes of preparations known today as ointments, pastes and cerates were classified collectively for generations as salves or unguents. All three classes are intended primarily for application to the skin, are semi-solid in consistency, and can be easily spread without the necessity of first wetting them. They constitute important groups of dermatological and cosmetic preparations principally because they protect, soothe and soften the skin, functioning in a manner similar to the fatty secretion of the sebaceous glands of the skin which normally inhibits the drying and hardening effects of the air. Consequently, in those conditions which are characterized by a deficiency in the natural, fatty, sebaceous secretion, the fatty, greasy or oily type of preparation is of restorative value. They are useful in preventing chapping of the skin caused by exposure to cold winds, to protect healthy skin against excoriation by irritant discharges, to mechanically protect ulcers, and in the treatment of dry, scaly skin conditions.

The fatty type of preparation is unsatisfactory for wet surfaces, for unless the fatty preparation sticks to the skin surface, it can do no good, and may possibly prove harmful by insuring retention of secretion with resulting multiplication of microorganisms and consequent irritation of the tissue surface by their toxic products. Because of their slight drying action, pastes may be useful in this type of skin application: but if a paste dressing is raised away from the tissue surface by secretion, a different type of application should be used. Mixtures of fats and water are more likely to adhere to slightly wet surfaces. The loss by evaporation of some of the water of these preparations results in a cooling effect which tends to relieve the hot, burning, itching sensations which accompany some skin conditions. (Note, "cold cream".) For the sake of clarity each of the three classes of preparations discussed in this article is defined.

Ointments are soft, fatty preparations intended to be applied to the skin by inunction. They soften or melt at body temperature. The more common ointment bases include petrolatum, lard, and wool fat. Recently vanishing cream bases have become popular, due largely to the results of investigations which have apparently shown that ointments containing certain antiseptics when made with a vanishing cream base are more effective germicides than those made with the greasy-fatty-type base. The formula which follows provides a satisfactory vanishing cream ointment base for most, but not all, of the usual medicating ingredients:

Stearic Acid	32 parts
Distilled Water	120 parts
Glycerin	12 parts
Potassium Carbonate	1 part

Because of the fact that true vanishing creams are harsh to some skins, a small amount of a non-saponifiable emollient, such as cetyl alcohol (about 2%) may be added to vanishing cream formulas. Ointments should be perfectly smooth and free from gritty substances in order to avoid mechanical irritation of the skin. Generally, solid ingredients which are soluble should first be dissolved in the smallest possible amount of the solvent before being incorporated in the ointment. An ingredient which is insoluble should be reduced to the finest state of subdivision and then thoroughly mixed with a small amount of a warm, bland, fixed oil like cottonseed oil before incorporation with the rest of the ingredients. The proportions of the stiffening agents and of the fatty ingredients of these preparations should be varied to maintain a suitable consistence under different climatic conditions.

Pastes are jellilike or doughlike preparations for external use which are either fatty or nonfatty. The fatty pastes are made with fatty or oily bases, and some contain as much as 70% of powdered ingredients mixed with the base. Pastes containing powders afford better mechanical protection of the skin, are more superficial in action, and are usually less readily absorbed than are the ointments.

Nonfatty pastes usually contain glycerin with starch, gelatin, tragacanth, soaps, or some other aqueous base. Two simple paste bases may be made as follows:

By A. RICHARD BLISS, JR.

EWING GALLOWAY

Tragacanth Paste Base

Tragacanth	4 parts
Glycerin	15 parts
Distilled Water	81 parts

Mix the tragacanth with 60 parts of distilled water, add the glycerin, and heat until a mucilage is formed. Then add the remainder of the distilled water. Medicaments or other ingredients may be incorporated with this base.

Gelatin Paste Base

Glycerinated Gelatin	20 parts
Glycerin	35 parts
Distilled Water	45 parts
(Active Agent)	10 parts

Dissolve or mix the active substance in or with the glycerin, add the distilled water, and incorporate this mixture with the glycerinated gelatin, previously melted on a water or steam bath. Continue the heat, stir until a homogenous mixture is obtained, and cool.

Pastes are employed when it is desired that the effect of the preparation be exerted primarily on the epithelium; while true ointments are preferred for conditions in which deeper layers of the skin are involved, and when absorption from the skin is intended. Pastes should not be used on the scalp or other hairy surfaces because of the matted mass which may be formed. Pastes are more economical than ointments.

Cerates are protective, unctuous preparations which resemble true ointments but are more firm and of higher melting point. They are of such consistence that they may be spread at ordinary temperatures, on muslin or other material, and yet will not melt or run when applied to the skin. They are used chiefly for application to inflamed surfaces, and are usually made with lard, petrolatum or oil as a base, with wax, paraffin, spermaceti or rosin as stiffening agents to impart firmness and to raise the melting point of the mixture. The formula of the simple cerate of the U.S.P. XI calls for:

White Wax	30 parts
Benzoinated Lard	70 parts

The instructions for applying these classes of preparations should include statements as to whether the agent should be rubbed on gently or vigorously, or spread on gauze, muslin, etc. and then applied. If surface action is desired, gentle rubbing only is required. In the event penetration is sought, fairly vigorous friction is desirable. After a preparation has been applied, it may be desirable to keep it in place. For ointments, some nonabsorbent material should be used, such as rubber tissue or oiled silk; for pastes, talcum, body or face powders usually suffice; and for cerates, gauze may be all that is required. For the hands, cotton or rubber gloves are convenient; for the feet, stockings; and for the scalp, a rubber bathing cap serves to keep the application in place.

The formulas which follow are type combinations and all have been tested:

Simple Ointment Base

White Wax	5 parts
Wool Fat	5 parts
White Petrolatum	90 parts

Cold Cream Ointment Base

Cetyl Alcohol	4 parts
Wool Fat	10 parts
Soft Paraffin	86 parts

Transparent Ointment Base

Cetyl Alcohol	5 parts
Liquid Petrolatum	5 parts
White Petrolatum	40 parts
Water	30 parts

Cocoa Butter Ointment Base

Spermaceti	8.5 parts
White Wax	8.5 parts
Cocoa Butter	12.0 parts
Liquid Petrolatum	45.0 parts
Distilled Water	26.0 parts

Greaseless Ointment Base

White Petrolatum	5.25 parts
White Wax	11.25 parts
Liquid Petrolatum	2.50 parts
Diglycol Stearate	6.00 parts
Water	75.00 parts

Chap Ointment

Menthol	4 parts
Phenyl Salicylate	2 parts
Olive Oil	20 parts
Hydrous Wool Fat	64 parts

Cod Liver Oil Ointment

Cod Liver Oil	50 parts
Petrolatum	40 parts
Japan Wax	10 parts

Antiseptic Ointment

Chlorthymol	2 parts
Benzoic Acid	2 parts
Salicylic Acid	2 parts
Coconut Oil	24 parts
Petrolatum	32 parts

White Ointment

Zinc Oxide	20.0 parts
Phenol	.4 parts
White Wax	5.0 parts
White Petrolatum	74.6 parts

An Analgesic Ointment

Menthol	1 part
Chloral Hydrate	10 parts
Camphor	10 parts
Wool Fat	79 parts

Triethanolamine Ointment Base

Triethanolamine Stearate	10 parts
Paraffin	25 parts
Petrolatum	65 parts

Almond Paste

Almonds, Peeled	15.0 parts
Triethanolamine Stearate	10.0 parts
White Wax	2.5 parts
Spermaceti	7.5 parts
Almond Oil	25.0 parts
Glycerin	1.0 part
Distilled Water	52.5 parts

Starch Paste

Starch	10.0 parts
Alum	.5 part
Phenol	.1 part
Distilled Water	89.4 parts

Lassar's Naphthol Paste

Betanaphthol	10 parts
Precipitated Sulfur	50 parts
Petrolatum	20 parts
Soft Soap	20 parts

Ichthammol Paste

Ichthammol	9.5 parts
Gelatin	9.5 parts
Glycerin	57.0 parts
Distilled Water	24.0 parts

Camphor Cerate

Camphor Liniment	10 parts
White Wax	35 parts
White Petrolatum	15 parts
Benzoinated Lard	40 parts

Paraffin Cerate

Yellow Wax	6.2 parts
Petrolatum	93.8 parts

Basilicon Cerate

Rosin	35 parts
Yellow Wax	15 parts
Lard	50 parts

Paraffin Dressing (Curatio Paraffini, N. F., VI) is a cerate that is so hard that it must be melted before application. The formula calls for:

Resorcinol	1 part
Oil of Eucalyptus	2 parts
Olive Oil	3 parts
White Petrolatum	12 parts
Paraffin	82 parts

This product resembles "Ambrine," the French proprietary which was used so extensively in the treatment of burns during the world War.

The reader will find formulas for members of the three classes of products discussed in this paper in the files of this journal for 1935, 1936 and 1937 as follows: Eczema-Dermatitis, Nov., '35; Athlete's Foot, Sept., '35; Burns, Aug., '35; Acne, May, '36; Scabies, Mar., '36; Psoriasis, Jan., '36; Ophthalmic Preparations, Mar., '37; and Counterirritants, Feb., '37.

The Medicinal Trend

(*Continued from page 480*)

Putting together the figures in both the ethical and proprietary classifications, we find that vitamin products totaled $11,547,082; gland products $11,778,709; Ointments, cerates, suppositories, globules $20,302,816; synthetic chemical medicinals $6,663,889; pharmaceutical metals and their salts $13,221,343; Liquid preparations $69,027,419; dry preparations $66,074,226.

All of the above figures given for various classifications are subject to some correction due to the fact that some medicines were not reported by kind. The amount so reported totals $38,394,085, of which $7,489,522 was for ethical products, and $30,904,533 was for proprietaries.

Total production of alkaloids in pounds was 1,062,520. Ephedrine production accounted for 11,559 pounds of this total; brucine 18,739 pounds; strychnine 24,561 pounds; caffeine 472,408 pounds; and other alkaloids including quinine, and nicotine, except sulfate 535,628 pounds.

TRENDS IN CARTONS

By ROBERT C. SPENCER*

Down past the soda fountain, lending library and toy department is where to find the drugs and cosmetics. If some of the manufacturers who have spent a little extra for a distinguished package design, and haven't accepted the lowest bid on their carton order could see how obscure their boxes become in many stores, they would rebel.

Perhaps they do know how poorly lighted the rear of a corner "Cigar, Soda and Luncheonette" can be. Probably they have seen too many times the cramped space into which their drugs, cosmetics and all the rest must be crowded. Surely it is a discouraging picture, but consciously or not some merchandisers are fighting to brighten this gloomy path to sales, and a little check-up demonstrates that fact.

Ninety-one packaged products were examined in an independent drug store. The trend was far and away to clear white or light shades in carton stocks with the simplest of bold, contrasting designs. The products included antiseptics, hair preparations, laxatives, cold treatments, shaving creams, deodorants, depilatories, dentifrices and skin lotions.

Fifty-eight of these articles were in clay-coated boxboard cartons, twenty-six were in patent coated boxboard containers and seven were wrapped. Thirty-three of the fifty-eight were printed in two colors, twelve in one color, thirteen in three colors. Eleven had been varnished or lacquered. Of the patent coated boxes, twelve were in two colors, two in one color, eleven in three colors, and one in four colors. Three of this group were varnished.

Obviously any conclusions from this limited investigation can be questioned. Yet these packages represent the most popular products of their kind on the market. They have been designed, re-designed and finally placed on sale as the "front" for widely advertised merchandise. Certainly no group of big-volume articles in any field is more attractively cartoned.

So the conclusions based on this sampling are important. Two colors is the current favorite combination; varnish and other gloss methods are being applied more widely; clear white clay-coated boxboards are preferred for two out of three cartons.

The reason for this simplification of design, (you can't reduce a two-color average and retain much effectiveness) is to increase the punch found in bright, reflecting surfaces, and in strong contrasts of ink to carton stocks. It all helps to make otherwise insignificant packages look important. And they surely do need full dress uniforms (though please let them be in good taste) to shine through the gloom of the rear of the shop, and into the jaded vision of prospects already diverted by a swell sale of such paraphernalia as electric toasters and nut bowls!

*Lowe Paper Co.

AMPOULES

By M. A. LESSER

Most particular care must be taken in preparation of substances to be injected intravenously, for the action is most direct and immediate. Intramuscular, intracutaneous and subcutaneous injections are slower in action, but impurities can cause very dangerous general and local reactions.

The National Formulary defines ampoules or ampuls as, "hermetically sealed containers which are filled with a medicinal liquid in a sterile condition, intended for parenteral use." The medicinal liquid is usually an aqueous or saline solution, but it may be a suspension in a readily absorbable oil. In other cases it may be a chemical compound, either a liquid or a powder, the latter usually accompanied by an ampoule of sterile distilled water, to be used for mixing.

Ampoule glass must be of high quality, stand intense heat and not chip. More vital still, the glass must be insoluble in water, not imparting alkalinity. Soft or poor glass, soluble in water, deposits needle-like crystals which if ever injected might cause death by shock or embolism. Any particle in solution might have the same effect. The pharmacopoeias of most nations have official methods for testing glass. The National Formulary gives tolerance of solubility and reaction for ampoule glass in the U. S.

Ampoules must be cleaned and sterilized. One manufacturer uses compressed air to blow out particles, washes the ampoules several times in freshly distilled water, packs them in racks and dries them in ovens. Another, boils the ampoules in a dilute acid solution, rinses them in powerful jets of distilled water, allows the ampoules to drain, again rinses, after which they are placed in a drying oven for one hour at 250° C. Another, soaks the ampoules in the chromate-sulphuric acid cleaning solution, after which the glass is thoroughly rinsed several times in distilled water and finally sterilized. Sterilization for glass can be accomplished by keeping the articles in a hot air oven at 170° C., for one hour, then allowing the oven and its contents to cool down slowly—avoiding undue stress and strain.

Distilled water or solutions made with it must be sterilized within twenty-four hours. F. B. Siebert[2] showed that distilled water, if permitted to stand for twenty-four hours or more, developed *pyrogenic* or fever-creating substances. This pyrogenic substance is most probably of bacterial origin. If these are formed, upon injection, they cause these reactions even though the water has been sterilized. In 1931 A. P. Matthews[3] showed that doubly distilled water was safe for intravenous solutions, since there was no increase in alkalinity or organic content of the water after long storage in ampoules. All water must be free of non-volatile matter, gases, micro-organisms and other oxidizable matter. Permitted total solids content of not more than 0.0005 gram per 100 cc. of water is much higher than that allowed by better manufacturers. Some of them distill water as many as four times. The last distillation is fractional since sodium hydroxide and potassium permanganate are added to remove any final oxidizable substances. This water is promptly mixed and passed through special filters. In another plant the water is immediately drawn off from the stills, into closed sterile tanks, to which the dry substances are added and mixing takes place. The solution is now drawn through porcelain candle filters of the Berkfeld type to remove any particles. All connections and pipes are of glass to permit of easy cleaning and to avoid chemical reactions. Doubly distilled water is quite satisfactory, provided sterilization is not delayed more than a few hours.

Although U.S.P. chemicals may be used, most pharmaceutical manufacturers use C.P. or Reagent grade of much higher purity. Cleanliness is paramount in filling. Floors and walls must be cleaned regularly. Equipment must be immaculate. Draughts are a source of contamination—air conditioning is a valuable asset.

Although a few plants have semi-automatic machines, filling is largely manual. The graduated burette is the underlying principle of all filling equipment. Some plants use the standard laboratory burette, filling the tube from a storage tank by a rubber tube. Others use the semi-automatic self-filling burette with a two way stopcock. This is more efficient and lessens exposure.

One turn of the stopcock fills the burette to the desired level, another turn shuts off the source. A slight twist allows the solution to flow out of the burette, through the rubber coupling, and out of the attached hypodermic needle into the ampoule. Technique of filling correctly is not easy. The knack of inserting the needle into the capillary portion of the ampoule, allowing the fluid to enter and to withdraw the needle without wetting the tube, requires practice. If the solution wets the neck of the ampoule, discoloration or cracking may occur when the ampoule is sealed. This sealing must take place immediately after filling. This is done by heating the capillary portion of the tube with a gas or gas and air flame, until the glass melts together. Touching the heated tip of the tube with a warmed glass rod hastens the closing process, removes excess glass, and leaves a smooth, round tip.

The large ampoules with openings at both ends are more easily filled. The ampoules are placed upright in racks, rubber tubes, one for each ampoule, extending from a feed pipe, are fitted over the lower tubes of the ampoules. The solution flows through the feed pipe and rises into each. The rise is equal in each ampoule. When the desired level in the ampoules is reached, the flow is stopped. The upper tubes are then sealed, the rubber couplings removed, the rack is inverted and the tubes at the other end of the containers are now sealed. The ampoules are now ready to go into the sterilizer.

All rubber tubing used should be the finest obtainable. Pure gum tubing is best. Other types of rubber deteriorate rapidly and give off portions of the coloring and filling materials. The gum tubing must be treated before it can be used. Thorough washing removes coating powders and loose particles. Kneading and stretching the rubber, aids to age it, renders it less brittle and more flexible. It is then sterilized before use.

Sterilization of filled ampoules is the most crucial step. More research has been devoted to this stage of production than to any other. Too great heating may cause undesirable chemical changes. Too little heat may fail to destroy dangerous organisms. Some preparations may not be sterilized by heat and require an entirely different method. Dry heat cannot be used for solutions. Autoclave sterilization is the most efficient procedure for solutions. This method is valuable for substances not easily decomposed by heat. In this method steam pressure is maintained at a temperature of 115° C. for thirty minutes. This method is most rapid and efficient, but it cannot be applied to materials which decompose in temperatures over 100° C. For such latter preparations, intermittent or fractional sterilization is employed. With this method, the ampoules are set upon racks or containers and immersed in live steam at 100° C. or in boiling water for twenty minutes. Larger ampoules require a longer exposure time. This procedure is repeated on the second day and again on the third day.

Substances which cannot be heated are sterilized by filtration. In preparing ampoules of such medicinals, aseptic conditions must prevail. The solution is cleansed of organisms by forcing it through tested filters of unglazed porcelain, using suction. The fluid is received in a sterile vessel. From this point the most rigid aseptic technique must be applied. The covered burette, the tubing, the needles, the ampoules, the table and the racks must be sterile. Filling should be done under a protective hood, with openings only to permit manipulation by the operator. This individual should wear sterile gloves, cap, gown and mask. Sealing should be done promptly, rapidly and under similar aseptic conditions. If the filter has been thoroughly efficient, free from any leaks or defects and if aseptic technique has prevailed, the contents of the ampoules are sterile. As with all ampoules, they must receive the laboratory check before being released.

Testing goes on while the ampoules are being examined, labeled and packed. This of course involves the risk of lost labor if the laboratory reports are not satisfactory, as well as the destruction of the lot of ampoules. The first step in the plant examination is the search for leaks or cracks in the ampoules. Leaks are readily determined by placing the ampoules in vaccum chambers containing a dye solution. A high vacuum is then produced, which causes any weakness in the ampoule to give away so that the fluid empties. On returning to normal pressure these emptied ampoules fill up with the dye solution, are easily recognized and removed. Foreign particles are detected by individual inspection. The ampoules are shaken slightly or quickly inverted in a bright beam of light, foreign particles are easily noted by the high light spot of the "Tyndall effect." The ampoules are also checked for color and clarity. After these examinations, the ampoules are ready for labelling which is usually done by machines.

In the laboratory a series of chemical, bacteriological, and often physiological tests are going on. The chemist first checks the pH of the solution using a potentiometer or a color comparator scale. Ampoule solutions should be as near to the neutral point as possible. Some solutions, such as those of certain mineral salts and alkaloids, require a slight excess of acidity which is neutralized by the heat of sterilization and action of glass. Excess acidity or alkalinity are undesirable. If buffers are used they must be checked and their action verified. A quantitative determination of each ingredient must be made to see that the requirements have been met and that no dangerous or undesirable changes have occurred. The bacteriological examination are based upon the U. S. Public Health methods.[4] The number of ampoules to be so tested depends upon the quantity of ampoules in each lot. The actual bacteriological culturing should be done in an enclosed booth, away from any possible source of contamination. Usually, nutrient agar and lactose broth is inoculated with fluids from the ampoules. Some ampoule materials, such as oily suspensions, require special modified media. One task of the bacteriologist is to determine the medium needed. After an incubation period of not less than

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TESTED FORMULAS

The market for brushless shaves is variously estimated at from one-fifth to one-third of the total shaving preparations market, but definite figures are not available. Other estimates say that the use of these preparations is increasing, stationary, or decreasing; as in any statistical problem in which adequate figures are lacking, the guess must be based upon the selling job that is being done.

In any event, a large volume of business is being done in brushless shaving creams and more than passing attention to their formulation is warranted. Frankly, we prefer a lathering cream, to which we changed after ten years of experience with various brushless types, bought and made. A recent article on the corrosion of razor blades gives a clue, however, to the continued popularity of non-lathering shaving creams. Regular shaving soaps show pH measurements from 8.0 upwards while brushless creams are very nearly neutral. Since corrosion of steel is far more rapid in alkaline than in neutral media, lathering creams are much more likely to dull the edge of the razor blade. Moreover, even the small amount of alkalinity present in lather may be irritating to especially sensitive skins.

Brushless shaving creams are oil-in-water vanishing creams. Modifications must of course be made in the fundamental formulas of these types in order to fit them for this special purpose, but even the simplest stearic acid-potassium hydroxide-water products will, in combination with the razor, produce an adequate shave. Glycerine or one of its substitutes is an essential component of creams of this type, to prevent excessive loss of water by evaporation and consequent drying out of the cream. From five to ten per cent. are sufficient, larger amounts being likely to cause irritation. As with usual vanishing creams, the tendency to produce a drying effect on the skin must be overcome by the use of an emollient. Lanolin, one to five per cent., spermaceti, cocoa butter, vegetable oils, etc. may all be used in quantities insufficient to alter the fundamental properties of the cream. Cetyl alcohol, as in so many products, is a useful addition in amounts of one per cent. or less, since it has emollient action and also tends to suppress oily "shine" on the skin.

Again we are not prepared to enter into any controversy, but we feel that the action of brushless shaves is strictly mechanical. Part of the action is one of lubrication, permitting the blade to slide over the skin with the minimum of drag, while another part of the action consists of mechanical support of the hair so that it will not lie flat when the blade hits it. In all cases, the face (and the hair) must be freed from its surface coating of oil by means of a preliminary washing with soap and water. Wetting agents to soften hair would seem to be ineffective in brushless creams since the large amount of emulsifiable matter in the cream itself would prevent action upon the hair.

The cream is applied to the wet face, mixes with water, and is then spread to form a uniform layer. For this reason, the cream should mix readily with water to make a homogeneous mass and be neither too sticky nor too consistent. On the other hand, the cream must not be too soft, since it must support the individual hairs of the beard. It is more or less the nature of these vanishing creams to be lubricating while they are moist so that no addition is strictly necessary for this purpose. Mineral oil is nevertheless frequently included and seems to do a good job.

Although not strictly a part of the shaving job, the readiness with which the cream may be washed from the razor is also quite important.

What factors influence the consistency of the cream; what factors influence the ease with which it can be diluted (on the face or on the razor)? The experimental set-up was made to cover only stearic acid and potassium hydroxide combinations, since there is no reason to believe that the use of other alkalies would lead to substantially different results. Chemically pure potassium hydroxide (85%) was used with a very high quality triple pressed stearic acid, the alkali being dissolved in heated water which was then added to the melted stearic acid at the same temperature. Temperature was 65-75° C. After mixing, the batch was stirred

BRUSHLESS SHAVES

By JOSEPH KALISH

Stearic acid	**35.5**
Sesame oil	**4.0**
Glycerine	**5.0**
KOH	**0.9**
Water	**54.6**

Stearic acid	**15.0**
Cetyl alcohol	**2.0**
Lanolin	**3.0**
Triethanolamine	**0.6**
Borax	**0.4**
Glycerine	**4.8**
Water	**74.2**

Glycol stearate	**15.0**
Cocoa butter	**4.0**
Stearic acid	**5.0**
Mineral oil	**1.0**
Glycerine	**5.0**
Water	**70.0**

Stearic acid	**20.0**
Cetyl alcohol	**0.5**
Mineral oil	**2.0**
KOH	**1.0**
Glycerine	**7.0**
Water	**69.5**

Glyceryl monostearate	**12.0**
Mineral oil	**2.5**
Spermaceti	**4.5**
Diethylene glycol ether	**7.0**

Water	**74.0**
Stearic acid	**24.0**
Oleic acid	**2.0**
KOH	**0.6**
NaOH	**0.2**
Glycerine	**8.5**
Water	**64.7**

vigorously at first to complete emulsification and then slowly, at intervals, to permit uniform cooling. Creams were allowed to stand overnight and then broken up and thoroughly stirred again. After the second stirring the creams no longer changed in consistency.

The experimental set-up is one we used in formulating cold creams and long ago found to be the only satisfactory method of clearing the ground. It is apparently laborious, yet it supplies all of the information desired without the necessity of repetition to investigate an omitted factor. Sixteen different stearate creams were made according to the scheme given below:

Stearic acid..	20.0	20.0	20.0	20.0	25.0	25.0	25.0	25.0
KOH.....	0.5	1.0	1.5	2.0	0.5	1.0	1.5	2.0
Water.....	79.5	79.0	78.5	78.0	74.5	74.0	73.5	73.0
Stearic acid..	30.0	30.0	30.0	30.0	35.0	35.0	35.0	35.0
KOH.....	0.5	1.0	1.5	2.0	0.5	1.0	1.5	2.0
Water.....	69.5	69.0	68.5	68.0	64.5	64.0	63.5	63.0

These were made on the same day and were given treatments as similar as possible. In the processing, this phenomenon was noticed. The higher the proportion of alkali and thus the higher the soap content, the more rapidly did the mixture thicken, in some cases becoming quite difficult to stir. Furthermore, with more soap, the mixtures were more translucent. In the finished creams there seems to be little differences in appearance, all being white and smooth with only little pearliness. The first emulsification is considerably more difficult in batches containing the least alkali since the small amount of soap formed will not rapidly emulsify the excess stearic acid. Since these mixtures thickened less rapidly, they had to be stirred more constantly until cold to prevent separation into layers.

As regards consistency, naturally the cream containing 35 per cent. of stearic acid and 2 per cent. of potassium hydroxide was far harder than the one containing only 20 per cent. of stearic acid and 0.5 per cent. of the

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AMINO ACIDS ARRIVE

By SIDNEY W. FOX and RAIA JOFFE

ALANINE CRYSTALS

SIDNEY W. FOX

THE human body, from a biochemical point of view, is an elaborate factory for executing a multitude of varied and interlocking chemical processes. Not only are the walls and partitions of this factory constructed of amino acids, the units of protein, but these same materials are important intermediates and substances in the body's business. Inevitable it is, then, that amino acids will occupy an unique position in modern medicine.

Fully cognizant of current advances, and confident of a considerable market on the horizon, several leading pharmaceutical houses are accumulating stocks of these important substances.

Food, as well as drug, industries are opening an eager eye to the situation. In the intermediate field of therapeutic nutrition, amino acids are beginning to find a supplementary use in vitamin products. This follows naturally since many of these compounds are essential to growth and maintenance of organic tissue.

Amino acids, as the name implies, are organic acids containing one or two NH_2 groups in the molecule. They can be isolated from animal and vegetable matter by hydrolyzing with acids. In many cases they are more cheaply and conveniently synthesized. The number proven to occur naturally is in dispute, but is about two dozen.

The amino acids are all white, definitely crystalline substances. For the most part they are soluble in water, and insoluble in organic solvents.

Glycine (amino acetic acid) is the simplest of the protein building blocks (hereinafter referred to as protacids—to signify amino acids obtainable from protein). Glycine, or glycocoll, is in large—scale production by several manufacturers in the United States and abroad.

Application in the treatment of a variety of muscular maladies is responsible for the popularity of glycine.[1,2] The usual dosage for myasthenia, progressive dystrophy, and neuromuscular atrophy is about 20 gms. per day by the oral route.

Improved results have been recorded for the administration of glycine with ephedrine.[3,4] Inclusion of glycine in the diet serves to increase appetite and body weight.[2] In this connection, gelatine has been recommended as food for its glycine content, which in some cases exceeds 25%, as determined by Bergmann and Fox.[5]

Glaessner[6] reports that glycine has successfully cured several cases of urticaria in 8-10 days. He suggests that the protacid here acts as a detoxicating agent, a physiological function glycine is known to possess.

Well over a hundred methods of preparation of glycine have been tabulated by Dunn.[7] The most favored synthesis depends on replacement of the halogen of chloracetic acid by ammonia, obtained from either the free base or ammonium carbonate.

Alanine (alpha amino propionic acid) has been found to be effective in decreasing hypoglycemia following insulin administration and has been successful in protecting against lethal doses of insulin[10]. This is probably due to the fact that it is readily converted by the body to glucose.

This acid causes a considerable increase in the bile and pancreatic secretions of dogs.[8,9] This property of stimulating secretions is true of many other protacids.

Alanine may be prepared by brominating normal propionic acid in presence of phosphorus and replacement of the halogen by ammonia, or by the reaction of acetaldehyde with cyanide and ammonia.[11,12] Modifications are to be found in the patent literature.[13,14]

Leucine (alpha amino isocaproic acid) has been recently[15] shown to be an indispensable component in animal nutrition, by Womack and Rose. It is also used[16] in culture media for diphtheria and other bacilli.

The best method of synthesis is from isoamyl chloride through the cyanide[17] to isocaproic acid which may then be bromated on the alpha carbon and treated with ammonia to give leucine. It may be isolated from casein and other proteins.[18,19] The methionine which contaminates the natural product has been found by Fox[20] to be readily removable by formulation.

Isoleucine (alpha amino beta methyl beta ethyl propionic acid) is also an indispensable dietary protacid[15], which may be synthesized in the same fashion as leucine, from an ethyl methyl ethyl halide. Its preparation from molasses was developed by F. Ehrlich.[21]

Aspartic Acid (amino succinic acid) is valuable in yeast nutrient media, and is the portion of the asparagine molecule responsible for its efficiency in yeast feeding, according to the yeast authority, R. Williams.[22] Since aspartic acid may be converted to beta alanine physiologically[14] and this latter substance is a powerful growth stimulant for yeast[22], its utility might thus be explained.

By the method of Dunn and Fox[23], aspartic acid may be cheaply and conveniently synthesized, or the natural form can be prepared from asparagine which is isolated from lupines.

Glutamic Acid. The manufacture of glutamic acid (alpha amino glutaric acid) is a several-million-dollar-a-year industry in the Orient.[24] The mono sodium salt of glutamic acid has the property of imparting to foods a meaty flavor. The condiment is used in the Far East much as we use salt and pepper. It is especially favored by Buddhists, who are forbidden to partake of meat.

In this country sodium glutamate is finding rapidly increasing market as an ingredient of soups and for flavor in general. It is popular with restaurants and hotels, particularly on the Pacific Coast. Its flavoring power is seven times stronger than that of table salt.

In the medical field, glutamic acid hydrochloride has been quite widely used as a means of introducing hydrochloric acid into the stomach. This type of administration of hydrochloric acid gives much better results than the inorganic acid alone.[25,26] "Glutamiron," for instance, is a preparation of glutamic acid, its iron salt, and ferrous chloride, for use as a gastric stimulant and hematinic.

Most glutamic acid is prepared by hydrolysis of wheat gluten with acid. Attempts to produce the material in this country from beet sugar molasses have not achieved commercial success.[27]

Arginine (alpha amino delta guanidino valeric acid) and biological systems in which it appears have elicited considerable biochemical interest. This is largely because of the widespread presence of this protacid in reproductive tissues. The protein of certain fish sperms, for instance, are reputed to contain as much as 90% arginine.

This amino acid is also essential to growth. Along with histidine, it has been found capable of greatly stimulating plant growth.[28] Arginine, with histidine, has been patented as an ingredient for a treatment for tuberculosis.[29] Clinical evidence for its value in this direction is, however, lacking.

Arginine may be prepared from gelatine by hydrolysis of the protein and separation as the flavianate.[30] It may also be manufactured from fish sperm, according to the method of Rasmussen.[31] This latter tissue is rich in arginine, but the preparation is more tedious than from gelatine. The senior author has found, however, that defatted spermatic tissue will yield its arginine directly, without isolation of the arginine-containing protein.[32]

Lysine (alpha epsilon diamino caproic acid) is an essential protacid for growth and maintenance. It has also been demonstrated, on rats, to be essential for sexual normality.[33] Lysine is often associated with arginine in reproductive organs. Along with recent advances in sex hormones, these two basis protacids deserve considerable physiological investigation.

A comparatively inexpensive synthesis of lysine is the one from cyclopentanone, by Eck and Marvel.[34] The natural antipode may be readily prepared from this product.[35]

Cystine (di-beta thio alpha amino propionic acid) is another essential protacid. Besides stimulating growth in a variety of organisms,[36,37] it has been found to increase hair and wool growth. Cystine accounts for practically all the sulfur found in such tissues. As an ingredient of media for bacilli, it has been found to be very valuable. It is also of therapeutic importance as an intermediate in the preparation of cysteine.

By the method of Gortner and Hoffman[40] cystine is readily prepared from waste hair. Improvements are recorded in a British patent.[41]

Cysteine (beta mercapto alanine) is being actively marketed as a wound dressing. The material is dis-

tributed as the hydrochloride, in a buffered solution. Cysteine apparently plays an important role in tissue oxidation, which may relate to its healing property, and other physiological possibilities.

In the treatment of Addison's disease cysteine has been successfully used.[42] Blood pressure of the patients increased with improvement in general condition.

The usual method for preparing cysteine, is by reducing cystine by hydrochloric acid and a metal.[43]

Tyrosine. Established uses for tyrosine (beta para hydroxy phenyl alpha amino propionic acid) are lacking, but a number of possibilities suggest themselves. In the former group is the use of tyrosine with glutamic acid as a meat flavor, which use has been patented by Barnett.[44]

One of the possible uses for tyrosine is as an antidote to spider bites. De Magalhaes[45] has found the substance to be definitely antitoxic to scorpion venom.

Tyrosine has also been shown to be the mother substance of the dark pigment of human skin.[46] It may therefore prove valuable to individuals with inadequate pigmentation, and as a natural sun-tan preparation.

The antitoxicity of tyrosine extends to its action on diphtheria toxin. Fifty to one hundred milligrams of the material produced, in guinea pigs, complete immunity to one unit of diphtheria toxin. Even ten milligrams increased the survival time of the toxin-treated animals by seven days.[47]

The usual hydrolytic methods for protein are used in the preparation of tyrosine from hair. Ferstl[41] has patented the use of strontium hydroxide as a hydrolytic agent.

Histidine (beta imidazole alpha amino propionic acid), on the market as "Larostidin," has found considerable success in the treatment of gastric and duodenal ulcers.[48,49] Histidine, and the closely related histamine, play some unexplained role in the digestive system; the value of histidine is however well established.

The usual course of treatment consists of twenty-four daily injections. Pain usually disappears after the first few days. Recurrence in responsive cases is not common.

A dilute solution of histidine has similarly given favorable results in the local treatment of cutaneous leisons, according to Craps and Alechinski.[50]

Lenormand claims intradermal injections of a solution of histidine and tryptophane gave good results on hay fever patients.[51] Fifty per cent of the subjects showed complete cessation of symptoms.

The preparation of histidine from blood paste is described in detail by M. T. Hanke and K. K. Koessler.[52]

Tryptophane (beta indolyl alpha amino propionic acid) paved the way for the modern knowledge of nutrition, including the early research on vitamins. The necessity for adding tryptophane to diets lacking in that constituent was first realized by Willcock and Hopkins in 1906.[53]

Although it has been questioned, there is a considerable evidence for the usefulness of tryptophane in treating anemia.[54,55] Histidine is almost always used with tryptophane for this purpose.

As with other essential protacids, tryptophane is decidedly valuable in bacterial culture media. It has shown marked growth stimulation for Clostridium botulinium.[56,37]

Tryptophane is usually obtained by the tryptic digestion of casein.[57] High yields are recorded for the method involving hydrolysis of keratins by strontium hydroxide.[41]

Thyroxine. Largely because of the hormonal activity of thyroxine [Beta (3,5 diiodo - 4[3′, 5′, - diiodo - 4′, hydroxy-phenoxy] phenyl) alanine], this protacid is deserving of a separate review, and, in fact, many have been written.[58,59]

The treatment of myxedema and of goiter by thyroxine are among its best-made uses. Thyroxine increases the basal metabolism, and in contrast to other stimulants, maintains the increased rate of production of energy for many days. This function emphasizes the greater utility of the active principle than the gland from which it is extracted. The difficulty of standardization of the variable glandular material has also proven thyroxine to be an especially valuable replacement for thyroid.

Thyroxine has given some of its most spectacular results in the alleviation of cretinism in children, bringing about normal growth and enhanced mentality(59, p. 143).

This protacid may be isolated from the thyroids of cattle, or prepared more cheaply by the synthetic methods of Harington and Barger.[60] This latter is an eleven-reaction synthesis, starting from para nitroaniline.

Iodogorgoic Acid, or 3, 5 diiodo-tyrosine, has received considerable clinical trial for treatment of hyperthyroidism and is marketed abroad.

According to Schurmeyer and Wissman[61], 0.1 gm. diiodo-tyrosine, given over a period of weeks to patients with hyperthyroidism, caused a temporary fall in basal metabolism, marked improvement in general condition, and a marked gain in weight. Used preoperatively the protacid was found to be better than Lugol's solution, and very effective in controlling mild cases.[62] The superiority of iodogorgoic acid to inorganic iodine medication has however been questioned.[63,64]

Preparation of iodogorgoic acid follows readily from the iodination of tyrosine.[65]

Aminohydroxybutyric Acid. Nutritional chemists have for years attemptedt o furnish rats with a diet of purified protacids which would completely substitute for protein in maintaining the animals alive. Climaxing several years' search, Rose and co-workers at the university of Illinois recently announced[66] the isolation of the last known essential component. This proved to

be one of the isomers of alpha amino beta hydroxy butyric acid. The active form of this compound will therefor need to figure in nutritional preparations which include essential protacids.

Though the problem is not finally solved, the following protacids are apparently essential to life: lysine, tryptophane, cystine, histidine, tyrosine, leucine, isoleucine, and aminohydroxy-butyric acid.

* * * * * *

Improved methods of preparation of proline[67], serine[68], and methionine[69], should pave the way for the therapeutic application of these compounds, and find for them a place along with the other protacids which have been welcomed in medicine.

As is evidenced by the recency of most of the medical work with amino acids, the recognition of their potentialities is an accelerative phenomenon. Certainly there is more than just appeal to the imagination in treating our ailments with chemicals that are flesh of our flesh and blood of our blood.

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Ampoules

(Continued from page 495)

48 hours, at 37° C., the plates and flasks are examined for growth. Clear plates and broth are an indication of sterility. Failure to get these conditions, means further testing. If contamination is proven the batch is often discarded, inasmuch as further sterilization is usually not feasible. Making these tests and interpreting the results calls for the highest technique on the part of the bacteriologists.

Some organizations, especially those making the larger volume dextrose and saline ampoules, perform physiological tests for reactive substances. Usually, rabbits receive intravenous injections of the material to be tested. The volume injected is based on the weight of the animal. Each rabbit's normal temperature variation is known. Temperatures taken on injected animals, should remain within this norm. Any marked deviation means repeated tests. If several healthy animals do not respond normally it is assumed that pyrogenic substances are present and that the lot cannot be used. It is seldom, with present manufacturing methods, that solutions must be discarded for this reason. It is, however, a good check for the manufacturer who wishes to have the finest, safest product obtainable.

After an ampoule has gone through these several phases of manufacture and testing, a product is obtained that is sterile, clear, potent and safe. It is not surprising to find that physicians and hospitals often prefer an ampoule of a known ethical manufacturer to those made in their own institutions. They have come to trust these producers and to realize that the facilities and methods of a commercial organization are usually far superior to those which are at their own command. They have but to inspect a pharmaceutical plant to realize the care and skill that goes into the manufacture of the ampoules that are in use. These large organizations have laboratories that are devoted to research, not only to create new substances, but to improve, wherever possible, those medicinals already available.

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Alcohol Riddle

(Continued from page 487)

tions. In USP preparations, for instance, only standard alcohol may be used. In flavoring extracts and medicinal preparations for internal use only ethyl alcohol may be used, which means payment of a tax of $2 per gallon on such alcohol. In external preparations such as rubbing alcohol, compounds, liniments, lotions, ointments, etc., specially denatured alcohol may be used.

Under a ruling established by the old Prohibition Bureau before repeal, the dividing line was the human esophagus or "Adam's apple." If a product was for internal use, below that dividing line, only taxpaid alcohol could go into it. If for use above the line, as a mouth wash, for instance, or for external use generally, specially denatured tax free alcohol might be used. This rule has continued in effect since repeal. Some time ago the Food and Drug Administration ruled that isopropyl alcohol could not be used in making rubbing alcohol compounds unless its presence is shown on the label. This ruling was based on the theory that when the consumer bought rubbing alcohol, he believed he was getting ethyl alcohol unless the label showed otherwise.

Proprietary manufacturers have at times contended with alcohol difficulties to a greater or lesser extent. While at present there does not appear to be any particular complaint about the situation on their part, yet the suggestion is heard that alcohol used in making preparations for internal use which cannot be used as beverages, should be tax free. No proposal to amend the law or regulations to this effect has been officially presented, however. Alcohol used in making proprietaries for external use may in some instances be denatured with one or more of the ingredients which go into the finished product, which is more helpful than to use entirely foreign ingredients. Under this rule, it is said, great savings on taxation, with resultant increased profits have been experienced by the manufactures of a well-known throat gargle preparation. Under the present system alcohol for use in making a mouth wash or throat gargle may be denatured in the alcohol plant itself and shipped to the gargle factory. This removes the alcohol from the beverage classification while in transit.

In a few instances specially denatured alcohol may be used in the making of preparations for internal use. For example vanilla may be extracted from vanilla beans by using denatured alcohol. Further processing or refining eliminates the denaturant or recovers the alcohol from the vanilla extract. Again, in the making of certain pills, specially denatured alcohol may be used in preliminary steps, the denaturant being eliminated later.

Under the Alcohol Tax Unit decentralized administration plan there has been complaint from alcohol trades and industries, not only because of delays in getting action on their applications, but also about curtailment by the supervisors of the supplies of alcohol for which application is made. The supervisor virtually enforces a quota system. He may require the permittee to make frequent reports showing his orders, business, shipments, production, etc., and if, in the judgment of the supervisor, the permittee does not need as much alcohol as he has applied for, then his quota is cut down.

Furthermore, under the liquor law repeal and enforcement act of 1935, the powers of the Internal Revenue Bureau with regard to denatured alcohol were greatly enlarged. This enlargement related particularly to following up the finished products of denatured alcohol from the drug or cosmetic factory, for instance, to the wholesaler or retailer. The Supervisor's authority was increased on the theory that some concerns to which manufacturers sold large quantities of drug or toilet preparations were acting as "cover houses" and were cooperating in the diversion of the alcohol from these products into the beverage trade, after recovery and cleaning.

Attention of the trades and industries concerned was called to this law of 1935 when still pending in Congress. At that time it was pointed out that difficulty might be experienced later. However, the legitimate industries and trades, it was understood, did not wish to take a position that might be construed as helpful to the bootlegger. Therefore they did not oppose the extension of authority. As a result, while the government may have been able to check up more satisfactorily on diversion of denatured alcohol into beverage channels, this condition is understood to have been accompanied by complications and difficulties for certain legitimate concerns. One of the most recent cases of the exercise of this enlarged power was in the case of certain rubbing alcohol concerns. Their products were seized and their operations seriously restricted on the ground that the rubbing alcohol was being cleaned and distributed to bootleggers.

Under the law of 1935, the district supervisors require bulk shipments of finished products such as toilet preparations and the like to be made only in one gallon containers instead of larger containers as formerly, save when exception is granted by the supervisor. Some legitimate concerns are understood to have had trouble securing approval of commercial package shipments. The lawful distribution of lawful finished products is reported to be restricted. One well-known New York concern of long standing has complained recently that their shipments have been unduly curtailed by government ruling. Bond is required to cover alcohol withdrawals, as a guarantee against diversion, but even then, it is said, a permittee cannot obtain withdrawals unless he satisfies the supervisor that he has legitimate need for the quantity applied for. Courts have held that tax-free alcohol is a privilege which the government may surround with conditions and requirements imposed upon permittees.

Although there has been no permit required for withdrawals of ethyl alcohol since prohibition repeal, yet

owing to departmental rulings and red tape, difficulty has been experienced by legitimate concerns in obtaining supplies, it is said, in some instances. From the official standpoint, if one wants to use taxpaid alcohol, all he has to do is pay the tax and get the alcohol. However, if he wishes to use such alcohol for making something which the Internal Revenue Bureau holds to be an alcoholic beverage or a rectified product, instead of a drug or perfume product, for instance, he must obtain a permit as a rectifier from the Federal Alcohol Administration. He must also pay an occupational tax under the internal revenue law of $100 or $200 per year, depending upon the size of his operations. Finally, he must pay a tax of 30 cents per gallon upon the rectified product. All of this, in addition to the regular $2 per gallon internal revenue tax.

Summing up the situation as regards specially denatured alcohol, government experts assert that the same system is in effect as during prohibition. Bond must be given to obtain a permit for making preparations which must be approved by the department. There is said to be no change in Title III of the Volstead act, which is still in effect despite prohibition repeal, except for "minor" amendments in regulations. Permittees may be called upon to make daily reports of shipments, etc. Furthermore, concerns which get the finished product may be required to make reports.

The denatured alcohol law provides in effect for government encouragement of use of alcohol in the arts, sciences and industries. But a multitude of other laws, besides regulations and restrictions, have been and are being enacted or placed around such use. And the end is not yet. It may be hoped that Dr. Wollner's plan for dealing with the alcohol problem will be fairly successful, both from the industry and government standpoints.

Retailers' Private Brand

(*Continued from page 483*)

The great mass of non-advertised items which make up every retailer's necessary inventory comprise products in fields where consumer advertising has played little or no part, as in most sundries, hospital supplies, etc., or in products of which the originality and beauty of the package or some scientific advantage in the product makes it profitable to the retailer to push it as he would his private brand.

It is certainly a debatable question whether or not, from the store's own viewpoint, a product in this category has an advantage over the dealer's private brand. On such lines the dealer can secure every advantage—profit, exclusiveness, etc. everything except the one, so paramount to many dealers, of owning and controlling the brand and the business developed for it. But it is easy to overestimate the value of ownership for a retailer. He is interested in profits. He is interested in building and extending trade, in attracting more and more new customers to his shop. But he is not interested in assuming the responsibility of the manufacturer and in that lack of interest lies the weakness of his private label.

Today packaging is an art which manufacturers must acquire. In the case of many products, particularly perfumes and cosmetics, the appeal of the package is essential to the sale. The retailer receives a constant flow of new and beautiful packages and attractive package deals. They attract trade, lend life and vitality to his store and display. Rarely has a retailer the time or facilities for competing in this race. Often, the harder he pushes and displays his own line, the more he is losing by not featuring products of superior attractiveness.

Technical developments are moving rapidly in our industry. The flow of new, interesting products are great trade stimulants.

These new and valuable products are not all coming from big companies. Often they are developed by relatively unknown companies by people new to the trade. In this great tide of continual development the retailer, no matter what his facilities, is left behind. At best, he can be an imitator of success. It would seem that are tailer would find it most profitable to recognize clearly the advantages of both advertised brands and private brands, assigning each to its proper place in his merchandising plan. Certainly there can be no advantage to him in distorting the picture so that he sees only ruin in one direction and Elysian fields in another.

Fixing the Prices

(*Continued from page 478*)

manufacturer who foolishly asks too much for his merchandise is bound to be punished by quick, remorseless competition, which will take his trade away from him. I point this out to you because it is the very provision of every Fair Trade Act, and I quote from the New York Trade Bill:

> "No contract relating to the sale or resale of a commodity which bears, or the label or content of which bears, the trade-mark, brand, or name of the producer or owner of such commodity *and which is in fair and open competition with commodities of the same general class* produced by others shall be deemed in violation of any law of the state of New York.

"Why should the Consolidated Brooklyn Retail Pharmacists suddenly try to revise the prices of their friends and suppliers, the manufacturers of trademarked articles?

"May I point out further, that the suggested minimum retail prices of many lines are exactly the same today as they have been for years past, despite the fact that during these last eighteen months, particularly, prices of materials, accessories, importations, etc., have increased the cost of manufacture very appreciably. On top of this, the industry is faced with a special 10% excise tax, and the Government's position is that this tax should be based on the prices obtained from custom-

ers, whereas it was originally passed in the form of a manufacturer's tax. If this governmental interpretation should hold, this tax then becomes a sales tax. In most cases, it has not been passed on by manufacturers, so that in addition to the rising costs referred to above, many firms are absorbing the 10% tax, as well. While my knowledge of kindred industries is a very limited one, I daresay that the general rise in costs must affect drugs, pharmaceuticals, and other things, as well.

"We cannot understand why your association should pretend to tell manufacturers what they should charge for trade-marked articles, in many of which, especially in the line of perfumes and toilet preparations, the elements of exclusive designs, beauty, and art enter. Some perfumers, many years ago, engaged the services of such outstanding designers as Lalique, or employed Baccarat, to design bottles for them, and they paid many thousands of francs for such designs. Other perfumers use stock bottles. So who is to determine whether some perfumes are or are not over-priced? Jasmin, which is a very essential product in the making of perfumes, can be bought for as low as 500 francs per kilo while the very best quality may bring as high as 12,000 francs for the same quantity.

"It seems to us that the retail druggists, in whose behalf this battle for better conditions was fought should, instead of approaching manufacturers for extra discounts, lower prices, and similar things, spend their energy and money in refuting the statements that are appearing under the names of certain retailers, which publicity is misleading the public into believing that Fair Trade Bills, and Fair Trade Bills alone, will make for higher prices.

"Long before Feld-Crawford Bills, or Tydings Bills, many firms in this industry inaugurated sales policies of their own to improve retail conditions. These undertakings were not accomplished without great sacrifice on their part. Elimination and curtailment of certain retail outlets were necessary in order to better control distribution. If, now that this battle has been won in some states, those for whom it was waged "about face" and defeat its very purpose, then manufacturers, in self-protection, will have to adopt new policies so that they may survive.

"You will forgive the brutal frankness of this letter, I am sure, but this industry, as a whole, I believe, can point with pride to its sincerity, and can boast of the strenuous efforts it has made in behalf of better market conditions. We think that announcements such as yours are bad strategy, but actually, as far as manufacturers of cosmetics and perfumes, as a whole, are concerned, not in accordance with the facts. The minute you tell the public that well-known trade-marked articles are over-priced, you are not helping yourself, but are only assisting in "pulling the chesnuts out of the fire" for those who would be very glad to kill the Fair Trade Laws.

"It is because we were shocked when we read the announcement in Tuesday's paper that I am writing you as frankly as this. Your comments will be appreciated."

Tested Formulas

(*Continued from page 497*)

hydroxide. Increasing the stearic acid increased the hardness or consistency of the cream; increasing the potassium hydroxide (and the proportion of soap in the finished product) also increased the consistency of the cream. Fortuitously, the cream containing 20.0 parts of stearic acid and 2.0 parts of alkali was of the same consistency as the cream containing 35.0 parts of stearic acid and 0.5 parts of potassium hydroxide. The same comparison seems to hold throughout the series, an increase of 0.5 in the KOH content having the same effect in increasing the consistency as an increase of 5.0 in the stearic acid content. This may vary, however, with the grades of stearic acid and potassium hydroxide used; even so, a small increase in alkali is obviously a more economical method of increasing consistency than a much larger increase in the acid content.

Ease of dilution worked in just the opposite direction, the greater the proportion of soap, the less easily could the cream be diluted. A nice balance must thus be reached between consistency and washability and this is best attained by leaning away from the strictest economy. Keep the alkali content low, in the neighborhood of 0.5 per cent. of potassium hydroxide (equivalent to an approximate soap content of 2.5 per cent.) in order to make a cream that will easily be diluted by the water on the face and easily wash off of the razor. Adjust the consistency by adjusting the amount of stearic acid, the region between 25 and 35 per cent. being the most generally satisfactory. Although comparison experiments have not been made at this time, generally similar effects should be obtainable by the use of equivalent proportions of triethanolamine or even sodium hydroxide. One part of potassium hydroxide is roughly equivalent in neutralizing power to five-sevenths as much sodium hydroxide or two and one-half parts of triethanolamine. With sodium hydroxide, relative hydroxide content must also be considered, pure potassium hydroxide assaying 85 per cent. as against 95 per cent. sodium hydroxide. The two types of soap are also different in hardness, the soda soap being the harder, and in their solvation or liquid absorbing powers, the potash soap being superior.

If we have not made the point clear before this, we emphasize it now. The tested formulas offered have actually been made up in "The Drug and Cosmetic Industry" laboratory; several formulas, often quite similar, are offered in order to suit different tastes; the finished products are at least fair and are generally marketable. But where subjective judgment plays as important a part as it does in the cosmetic industry, no single item can satisfy everybody. Make up all of the items in a given group and choose from among them the one that best satisfies you. If none is wholly satisfactory do not hesitate to make adjustments or a complete new set of experiments along suggested lines.

HANDLING MATERIALS

By FRANCIS CHILSON
Production Engineer

All manufacturing operations including warehousing, processing, packaging and storage of finished materials may be reduced to the common denominator of handling. It is, as we have so often pointed out, the amount of handling and the cost of this operation which determines the structure best suited for a particular purpose and the equipment that will most adequately meet requirements therein. The selection of so common a thing as a mixer is made—or should be—with an eye to the amount of handling that will be required to load and to discharge it. All layout problems revolve around this central theme. All labor costs resolve into handling costs, and, indeed, the very essence of motion study is to determine the manner in which a maximum amount of material may be handled with the minimum of effort and lost motion. But handling costs are not limited to human effort but apply to mechanical effort as well. In plants which are virtually automatic the amount and kind of equipment required to convey the material from one point to another determines the size of the investment and hence of depreciation charges, interest, maintenance costs, etc. In the first case handling costs are evidenced in wages paid and in the second by operating charges.

When building a building, and making a layout, for it, or in selecting equipment we must keep in mind that every decision we make now will affect handling costs indefinitely. A poor decision will mean high handling

costs. Unfortunately, cost accounts never reveal more than a small part of the total handling cost involved in putting an item through the works from the time it is received in the warehouse until the finished article leaves the plant. No accounting system however detailed could isolate all handling costs. The only way the picture can be drawn accurately is to do it in detail with a stop watch. But don't do it unless your nerves are shock proof because you are likely to find that the apparent profit on some of your pet items is not a profit at all, but a portion of the profit on other items, which accrued to it by virtue of the crude methods of expense distribution which are, of necessity, employed in accounting. It is a good thing, however, to make an accurate study on a few items just to measure the efficiency of your layout and your handling methods.

In this paper it is our purpose to confine ourselves to a discussion of the physical movement of materials and the various ways by which it may be accomplished. Perhaps the most elementary handling device is a wheel truck. The average plant man will skip this because he will feel that there's nothing to be learned about wheel trucks; they're too simple. But are they? Look over your own wheel trucks. Quite likely you have about forty varieties—the average plant usually has about that many. Some will be high, some low; some will have three wheels, some four; some will have four swivel casters, others will have two tight and two swivel casters; some will have two high wheels centrally located with guide casters front and back; some will have three wheels with two stationary wheels in the fore part and a swivel guide wheel at the back.

The very variety of wheel trucks in the average plant is evidence of the fact that the man who bought them hadn't realized that he was buying handling tools, and that there is more to the selection of wheel trucks than he knew. The other day we watched a husky wrestling a four wheel bin truck down an eight foot aisle. All four wheels were swivels which made the truck want to go other places than the one to which it was being coaxed. It swerved from side to side like a production man at a convention, hitting obstacles on both sides of the aisle and each time it struck, the hostler had to stop, back up and start all over again. If you think it is easy to shove such a truck try it yourself. Now, if the man had had a decent truck, one with two fixed and one or two swivel casters, so that it could be guided easily, it is obvious that he could have pushed the load from one point to another in less time, and by the same token, at less expense. In other words he could have handled more loads per day.

When we begin to consider that wheel trucks are handling tools, we begin to perceive that certain types of trucks are better suited than others for handling certain classes of material. Then when we check into the matter a bit more we find that there are standard trucks in more varieties than would patch hell a mile. What with hand trucks, and barrel trucks, bin trucks and platform trucks, table trucks and shelf trucks and so on we should certainly be able to select the best variety of trucks to suit our purposes. Another point;—it is better to spend a few dollars more and get the wheels or casters equipped with roller or ball bearings because they permit a man to move a load twice as great as he ordinarily could. Still another point, floors subjected to heavy trucking wear out readily so it seems best to buy fibre wheels and casters; it is cheaper to wear out the wheels than the floors.

Following trucks came skids; and recently pallets. The purpose of these devices is to eliminate rehandling. The disadvantage of a wheel truck is that it must be loaded and then unloaded at destination because such an expensive tool cannot be tied up indefinitely with one load. The skid and pallet idea provides a platform, which once loaded remains loaded in storage until wanted for reshipment or processing purposes. The idea of providing a unit load and of handling that unit load through all subsequent storage and handling operations is a good one, when there is plenty of storage and aisle space and good smooth floors. Once the skids or pallets have to be unloaded, however, they become a positive detriment, because the empty skids present a stacking and handling problem in themselves.

When skids are maintained as unit loads and are stacked one above another, a rack is required because the skid rests upon four legs or upon two runners.

It was for this reason that pallets were developed. These are simply flat crates made by nailing boards over three two by fours. By inserting the forks of a lift truck between the boards the entire load can be lifted and carried. Since the pallets are flat on both sides and hence distribute the load, one loaded pallet can be set above another, thus eliminating the need for racks and making it possible to save space also. Each pallet load, however, must be square on top of course or else stacking of loaded pallets is impossible. Pallets and lift trucks find their best application in single story plants where broad aisles are available and the nature of the process permits the maintenance of units loads throughout.

Where longer distances must be traversed and loads are of varying character, motorized trucks, tractors or jitneys find application. These can also be employed for handling skids, and, because they may be provided with self contained hoisting devices, for stacking purposes as well. These devices can be employed for most handling operations, but they require broad aisles for

(Continued on page 509)

COMBINATION OFFERS

By S. W. DWORKIN*

After a brief period of a few years, your so called combination deal racket is again in waiting. How well we remember 1931 with the Luxor face powder and soap; Colgate shaving cream with Gillette razor; Squibb tooth paste with a tooth brush; McKesson-Robbins Mouth Wash with Dental Cream; Palmolive Shaving cream with razor; Colgate tooth powder with brush; Mennen talcum powder with nursing bottle; Squibb shaving cream with shaving brush; Coty's shaving cream with blade; McKesson-Robbins Antiseptic No. 59 with Dr. West Tooth brush; and countless arrays of other products in combination with "something for nothing."

I really thought after sharp criticism of these unsound policies of merchandising that the practice would be stopped. But it seems to me that for a few years it was somehow under cover and substituted with premiums which are, by the way, still lingering favorably with a few manufacturers.

How well we remember the Mickey Mouse books given out by two competitive tooth pastes; with the riots in the stores claiming that the druggist had sub-

*Chairman, Trade Committee, Bronx County Pharmaceutical Association.

stituted one book for the other. How can we forget the classical Little Orphan Annie collection given out by the Ovaltine people; the tumblers by Ipana; knives; spoons; and now the latest "Royal Blue" dishes. Speaking of the "Royalty" may I suggest to the manufacturers that they have a selection of colors which will suit every shade in minute detail for the interior decorations of modern apartments. Shall I go on enumerating the various jars and trinkets and other trash that was unloaded on the retailer to distribute free to the consumer to the extent that some retailers were compelled to establish a special service and claim department, for appeasing the public as to the quality of the stainless steel knives, and triple coated silver spoons, and also for the exchange of the various glassware found broken in transportation by the consumer, or cracked by mishandling in usage. And then a complete victory of genius in the advertising field. A set of pictures, a gallery of art to be distributed to consumers. Free with every tube of tooth paste! Imagine the retailer selling a tube of tooth paste after eating his heart out explaining to the consumer that twenty-seven cents is not a robbing price for a fifty cent seller. He is required to open up the selection before each individual and wait until the artistic inspiration will come and the customer will select the desired picture. Not only is he endangering the loss of business completely because customers are waiting, but some will accuse the poor dealer of trying to sell obscene pictures in his establishment, and being good church going men and women refuse to deal in his store.

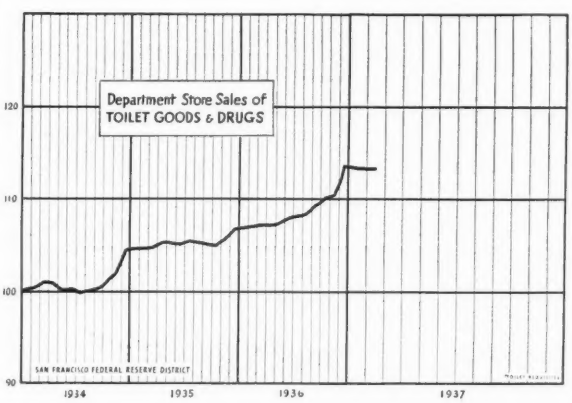
As to the combination deals, with the advance of time, a new technique was invented; a new combination package was put out on the market, that is, that one article has no relation to the other (Italian Balm with Listerine Tooth powder and Italian Balm with Drene shampoo) but at the same time they are combining these items and offering them to the public at the price of one. The staggering part of it is that both articles are of different manufacturers. To top off the parade a well-known tooth paste, "Bost" decided to help the present administration by supplying the needy population with a free tooth brush for life, naturally, with the provision that they use their tooth paste only.

May I ask the manufacturers of tooth brushes what they are going to do with their production? I remember well only a few years ago when a woman came to my store and asked what I would give in exchange for eight tooth brushes that her family had accumulated in purchasing several deals. I remember as now, I offered her a bottle of Magnesia for a joke, but she accepted it and I don't know yet who got the best of the bargain. If we should take specific cases and examine them from every angle we will find that the entire merchandising scheme is unfair to the public and to the dealer. I would gladly analyse each individual deal but space forbids. Those combination sales are making the public free merchandise shoppers and as I have stated before the cut rate first developed the price shoppers and the combination racket is now developing a nation of free merchandise shoppers.

Can we not also realize that the customer after being educated in getting a trade-marked item with some other item free, will, after the offer is withdrawn, refuse to get the same item single at the same price. Not only that, but in many cases companies put out new premiums with the same articles actually placing the dealer in a position of forceable buying as he cannot move the previous stock with old premiums. The public demands the new deal! Many salesmen urge the retailers to take advantage of the so called merchandising by withholding the bargain by the simple means of dividing the offer and selling the items separately. This of course is dishonest and encourages the retailer to indulge in petty larceny. I missed many so called combinations being sold on the market that I could not enumerate them in this article. But I cannot finish it without adding the newest creations of this year as Pinaud's Lilac Vegetal Compound with talcum; Noxema with free soap; and many others.

I even hear that an enterprising advertising agency offered a laxative tablet manufacturer a combination deal to be advertised, i.e. a box of laxatives and a roll of toilet paper. Also to a manufacturer of a profylactic a box of "improved emmenagogue" with each package, and many other stunts in modern merchandising.

May I again instill in the minds of the manufacturers that the combination deals are not in favor with the retailer and wholesaler as it goes without saying that they are exactly in the same position in this case. When we sell those combination deals we are reducing our volume in the same proportion as the wholesaler. As to the premiums, they are simply a nuisance and sometimes a disgrace.



Sales of toilet articles and drug sundries by department stores in the San Francisco Federal Reserve District were one per cent. less in February 1937 than in the same month of the previous year. This corresponds to an adjusted index number of 113.3, or approximately the same as in January of this year. Sales in Los Angeles were four per cent. greater than in the corresponding month of the preceding year, but they were six per cent. less in San Francisco and one per cent. less in the Pacific Northwest.

COSMETIC MANUFACTURE 1935

Manufacturers of perfumes, cosmetics and other toilet preparations in the United States reported a moderate increase in employment and a substantial increase in production in 1935 compared with 1933. The number of wage earners employed in the industry in 1935 was 9,649, an increase of 7.5 per cent. over 8,978 reported for 1933, and their wages, $8,578,184, exceeded the 1933 figure, $7,469,884, by 14.8 per cent. The total value (at F.O.B. factory prices) of the products made in this industry in 1935 amounted to $119,446,172, an increase of 23.1 per cent as compared with $97,048,992 for 1933.

This industry, as constituted for census purposes, embraces establishments engaged primarily in the production of preparations and compounds used for toilet purposes, such as powders, washes, lotions, hair dyes and tonics, rouges and lip sticks, dentifrices, etc. It does not cover the manufacture of toilet soap, nor that of shaving cream containing soap, but shaving cream containing no soap is treated as a product of the industry. Because of the abridged schedule used in 1933, comparisons between 1935 and 1933 figures for individual items are not available. Small companies, with output valued at less than $5,000 a year, as well as the output of cosmetics by companies not engaged primarily in the manufacture of cosmetics (pharmaceutical companies, etc.) have not been included in the compilation. For these reasons, THE DRUG AND COSMETIC INDUSTRY monthly figure for 12 months wholesale sales value is on the whole more trustworthy and gives a better picture of the size of the industry.

The tabulation below compares items for 1935 and 1931 and includes production of perfumes, cosmetics and toilet preparations made as secondary products in other industries.

Handling Materials

(Continued from page 506)

easy manipulation. Since jitneys are expensive and since they require an operator, they can be used economically only when they are kept constantly in use.

The disadvantage of a jitney lies in the fact that during loading and unloading periods the entire equipment is idle and the time of the operator is lost. To overcome this the truck and train system was developed. This system provides a means whereby several trucks may be coupled together and transported by the jitney or by a small tractor. The trucks are equipped with automatic couplings, permitting the driver of the jitney to couple up several trucks by simply backing into them. He can also release the trucks without dismounting simply by treading on a foot pedal. Thus the jitney or tractor driver and his equipment can be kept busy while the trucks are being loaded or discharged.

Another useful handling device is the mono-rail and trolley systems. These are available in automatic and hand operated types and can be equipped with special grabs to handle almost any kind of load. They are used also for handling barrels and drums in processing operations. With proper means they can be used for handling skid loads of cases. By the use of tote pans they are frequently employed for assembling orders. They are most useful, however, when there is a frequent repetition of the same kind of load.

Still another type of handling device is the conveyor of which there are an almost unlimited number of types. When the loads are fairly uniform in size and rigid in character, as in handling cases for example, roller conveyors provide a means of transport between one point and another and a live storage area also. This storage feature is particularly useful when roller conveyors are used for feeding containers to packaging lines and for removing finished cases. When several different cases must be transported to a given area it is best to use several lines of conveyor, for if one line only is used, the storage feature is lost and it involves a rehandling problem to sort the cases as they come off the conveyor, and a trucking problem to remove the sorted cases to destination. Roller conveyors are most economical in multi-story construction which will provide gravity fall and in single story plants where sufficient headroom is available to permit a drop of at least one half inch per foot. At some extra expense and operating cost roller conveyors can be operated on the level by using belts to drive the rollers.

Roller conveyors by no means are universally applicable. The more uniform the case size the better will they function. When the units to be handled vary from very large to very small, conveyors are considerably less efficient, because they must be made wide enough to handle the largest unit, which means that they are too wide to handle the smaller units, which tend to tip over unless the rollers are closely spaced, or to turn around sideways. Soft packages like bags will not of course ride on rollers.

When the variety of merchandise is great in respect to size, type and character, it is best to use belts or apron conveyors. These must travel in straight lines and any turning that is to be done is accomplished by running a transfer unit at right angles to the main line.

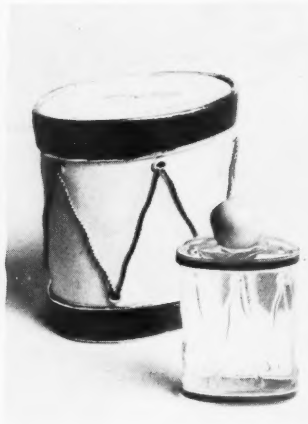
As there isn't sufficient space to discuss the many other devices for handling liquid and bulk materials we must terminate now with this thought: Unless a plant has only one product to handle it is not to be expected that any one type of handling device can economically be employed for handling materials. Too often we get sold on a particular system and try to adapt it to every purpose. All handling devices are simply tools and the most economical way to get a particular job done is to use the best tool for the purpose. The simpler handling devices are not expensive and hence if one makes a mistake it is readily remedied. But before commiting yourself to the fixed handling devices such as conveyors, mono-rails, etc., be pretty certain you are right because a mistake here is costly and it cannot be remedied except at considerable expense.

DAGGETT & RAMSDELL
SKIN TONIC

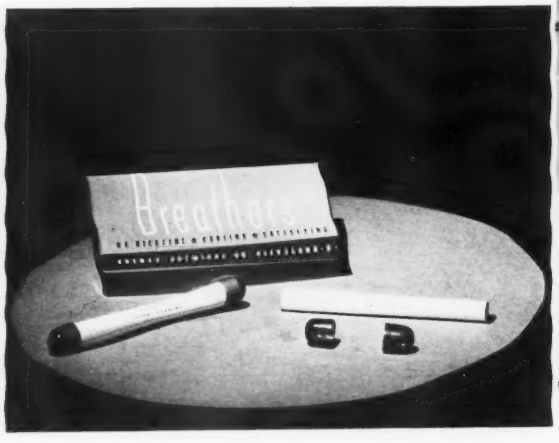
ACTONE

Le Cross

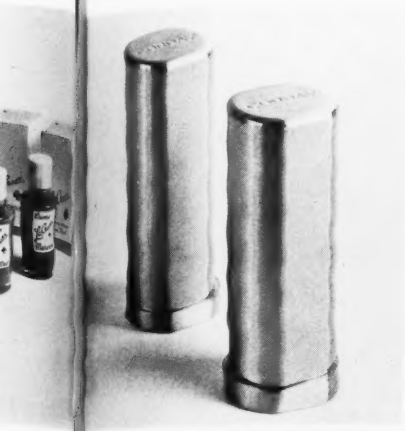
CHANEL



FOR BODY FRESHNESS
HUSH
The Personal Deodorant Powder
FOR USE ON SANITARY PADS


Breathex

LARKIN



DAGGETT & RAMSDELL

The Daggett & Ramsdell Golden Minute Kit is a useful combination package, attractively styled in silver. It contains a two-ounce jar of Golden cleansing cream and a 6-ounce bottle of skin tonic.

STILLMAN CO.

"Actone," a product of the Stillman Co., which has been on the market for some time, now appears in a new package. Actone is a pimple remedy in liquid form. Actone also serves as an excellent powder base.

LA CROSS

Four new nail polish colors have been added to the La Cross line of polishes: Sunrise, Sunset, Plum Red and Maroon. La Cross has also recently brought out a creamy hand lotion which is quickly absorbed, leaving a delightful fragrance, and also "Nailgroom," a preparation for brittle nails and dry cuticle.

CORDAY

Corday's new lipstick case has been created as a harmonizing note with the rest of the Orchidee Bleue line. The case is graceful in dull gold with blue enamel. The lipstick is available in all of the Corday shades, light, medium, raspberry, and Electric.

SEARLE RESEARCH LABS.

G. D. Searle & Co. are introducing Ketochol, which is a combination of the oxidized form of the bile acids in approximately the same proportions as present in normal human bile.

CHANEL

The Chanel gift package is an exquisite presentation of a crystal bottle in a satin jewel case, magnificent in its rich simplicity. It is a gift for all occasions, weddings, graduations, birthdays, anniversaries, etc.

PARFUMS CHARBERT

Parfums Charbert presents a new gift size package. It is available in four of the lovely Charbert odors, Drumbeat, Of Thee I Sing, Carnation and Gardenia. The perfume is packaged in the familiar drum bottle and carton.

THE HUSH CO.

The Hush Co. is offering its annual deal on Hush Cream and Hush powder deodorants, to coordinate with its consumer advertising campaign which will start April first, and last through the six hot weather months—April to October.

JEAN NATE

Jean Nate's Friction Pour Le Bain which has been packaged in an eight-ounce bottle is now offered in a new size for the week-end. The smaller size is presented in a two-ounce bottle in the same attractive silver and black box as the eight-ounce bottle

PEROXIDE CHEMICAL CO.

The Peroxide Chemical Co. presents two brands of facial creams. The striking white and cerise color combination plus a handy flexible rubber facial brush gives these packages a lot of feminine sales appeal. The opal jars by Hazel-Atlas Glass Co. have openings large enough to permit the cream to be easily removed without waste, and the empty containers make attractive accessories for the dressing table. Lithographed caps also by Hazel-Atlas.

CHENEY CHEMICAL CO.

The Cheney Co. offers "Breathers." Do not light a Breather, merely remove the red end caps and inhale like a cigarette—no nicotine, just cooling and satisfying.

LARKIN CO.

The Larkin Co. offers four creams, cold, preserving, cleansing and finishing creams, egg shampoo, witch hazel shaving cream and a brilliantine, all attractively packaged. Each package contains a certificate of Vitamin F potency.

LUCIEN LELONG

Lucien Lelong has recently introduced a cologne in the Indiscret odor—a lovely fragrance, uplifting and invigorating.

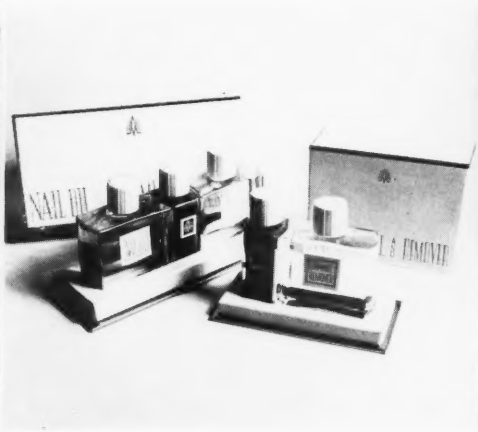
YORK PHARMACAL CO.

New products have been added to the York Pharmacal Co. line, including a 1/2 oz. nail polish package, 3 oz. and 6 oz. brilliantine packages and a 3 oz. and 6 oz. hair oil packages, all of which feature the unique fan design with heart-shaped label. Containers are by Owens-Illinois Glass Co.

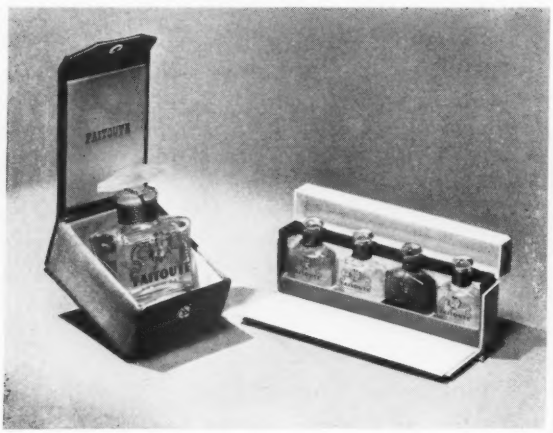
GARDENIA
BABANI

Tna de Cris

VEGA
GUERLAIN



NUMÉRO
12
LENTHERIC
PARIS
NUMÉRO
12
LENTHERIC
PARIS


FAITOUTE

BEAR

BABANI

Babani presents six captivating new odors attractively packaged. The odors are classified into two groups: Oriental and Giardini, Jasmin and Gardenia, the floral. Babani recently opened a distributing office located at 521 Fifth Avenue, New York.

YARDLEY

Yardley's English complexion powder was prepared to give a soft, smooth finish to dry complexions. It is light, fine and clinging and imparts a smooth surface to the skin. This new powder is available in seven shades. The ivory-colored box has a sculptured top surmounted by the honey bee.

INA DE CRIS

Ina De Cris has entirely restyled her line of preparations which includes cleansing cream, Velvet Cream, tissue cream, and eye cream. Lipstick and rouge have been added to the line which is now beautifully packaged in a soft, light ivory with the coat of arms and lettering in brown.

BREATH PERFUMER

"Your Breath Perfumer" is a convenient vest-pocket ally for the person who never wants to offend. Packaged in little crystal Kimble Vials with the handy Re-Seal-It Cap (Snaps on and off), these delightful breath purifiers are gaining widespread acceptance among fastidious shoppers.

YORK PHARMACAL CO.

"Lady York" cold cream is a new addition to the York Pharmacal Co.'s line. It comes in 2-oz. and 5-oz. sizes, both packaged in applied-color glass jars of stock design supplied by the Owens-Illinois Glass Co.

GUERLAIN

Guerlain's newest perfume "Vega" will be placed on the American market the latter part of April. Vega is a delightful bouquet odor which is packaged in an attractive bottle and box of rich ruby red.

HARRIET HUBBARD AYER

Harriet Hubbard Ayer is introducing a nail oil—luscious honey color with strong lubricating properties. A very attractive set is now being placed on the market consisting of the nail oil, liquid enamel and enamel remover. This trio is packed in a simple but smart black and white box.

LENTHERIC

Lentheric's Numero 12, previously referred to as Le Numero Douze, has been beautifully restyled; and the Numero 12 line has been extended to include bath powder, bath oil, sachet powder, satin sachets, and talcum powder.

MAU MARY

The Mau Mary Labs. are introducing to the American market a balm analgesic which relieves muscular pains, headaches, chest colds, etc. The attractive tube carries the Swiss cross, and is equipped with No-Kap closure.

GILDA AUDREY

Gilda Audrey has placed on the market a complete line of cosmetics and beauty preparations. The rouges and lipsticks have a vitamin F content. The jars are all white with maroon caps. The preparations are made by the Glemby Co.

FAITOUTE

Faitoute presents sixteen lovely flower odors. The ounce packaging is in a green satin box lined with peach satin. Another attractive package is the quartette, a cream colored, slender oblong box, edged with green. All of the Faitoute odors are lovely flower duplicates.

BECTIN-SEYMOUR

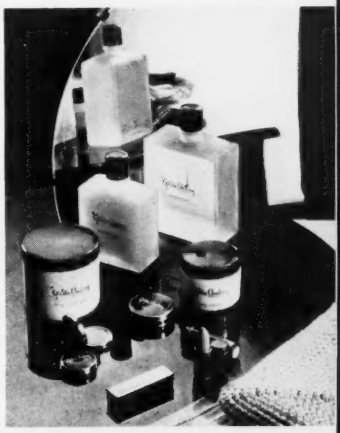
Bectin-Seymour is offering Blue Beard shaving cream, which as the name implies, is for men with "blue" or stubborn beards. It comes in both brushless and lather. The tube carries the convenient No-Kap closure.

VIGOROL

Vigorol is packaged in an attractive blue bottle of modernistic design. Label is white with decorations in a harmonizing shade of lavender. Cap is of white molded plastic.

BLUE BIRD, INC.

Blue Bird Creme nail enamel makes its appearance in a bottle of clear glass which shows the exact color of the nail enamel contained. The label is beige with a blue imprint and the box is beige and blue.

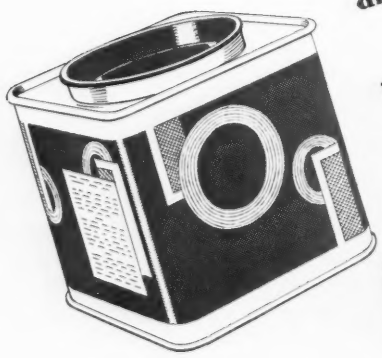


3 RINGS at the CIRCUS

7 BRANDS at the STORE

The Big Tent ticket-wagon makes a 3-time sale in One—but at the store the sale is **ONE** from maybe **SEVEN** brands.

CONTAINER Showmanship makes **YOURS** that **ONE!** **"NATIONAL"** puts design styling and "product dress" into a front row display of product Value.

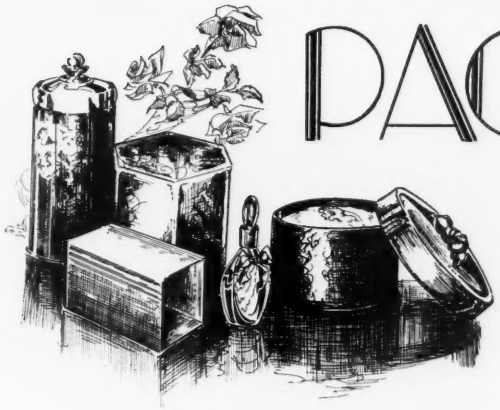


NATIONAL *can!* quicken the urge to **BUY!**

Call us into Your Packaging plans

"NATIONAL"

NATIONAL CAN COMPANY • EXECUTIVE OFFICES • 110 EAST 42nd STREET • NEW YORK CITY
Sales Offices and Plants • NEW YORK CITY • BALTIMORE • BROOKLYN • CHICAGO • BOSTON • DETROIT • HAMILTON, OHIO

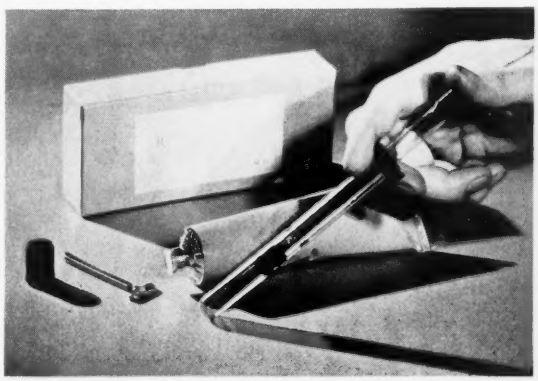


PACKAGING NOTES

A LADY'S HANDBAG seems to have been the inspiration for the new Lubin perfume container. Made of black glass, the bottle takes the form of a tiny handbag. Every minute detail of a handbag is carried out carefully in the bottle, which has a metal top with a black glass stopper. A woven silken cord serves as the handle.

A UNIQUE AND ENTIRELY DIFFERENT packaging has been created by Vita Ray for five of the Vita Ray preparations, namely, two lotions, a jar of cream, and a small box of face powder. The two end bottles are triangular in shape so that any one of the three flat edges fits perfectly against the edges of the small box of powder and the cream jar set on top of it. All four items are fitted securely into a metal holder or rack, without any further wrapping. The idea of this ensemble is that it takes up the least possible space and yet all four items are kept together as one unit for convenience in weekend bags, and then onto the dresser or

bathroom shelf. Similar bottles and sizes of the cream jar and face powder may be purchased separately so that any item in the set can be replaced at any time.



"MEASURED DOSE": The measured dose which faithful readers will recognize as having crept into these columns on many occasions in the past, returns again in the form of a "measured dose" applicator for Lygel, Lehn & Fink's feminine hygiene jelly.

Step Up Sales with Stylish
METAL CAPS

STYLED for bigger sales are these colorful, eye-compelling packages for the beauty preparations made by Thornley, Incorporated, N. Y. Their closures—Armstrong's Metal Caps and Jar Covers—are coated in red to match the red and blue metallic labels, producing harmony in design.

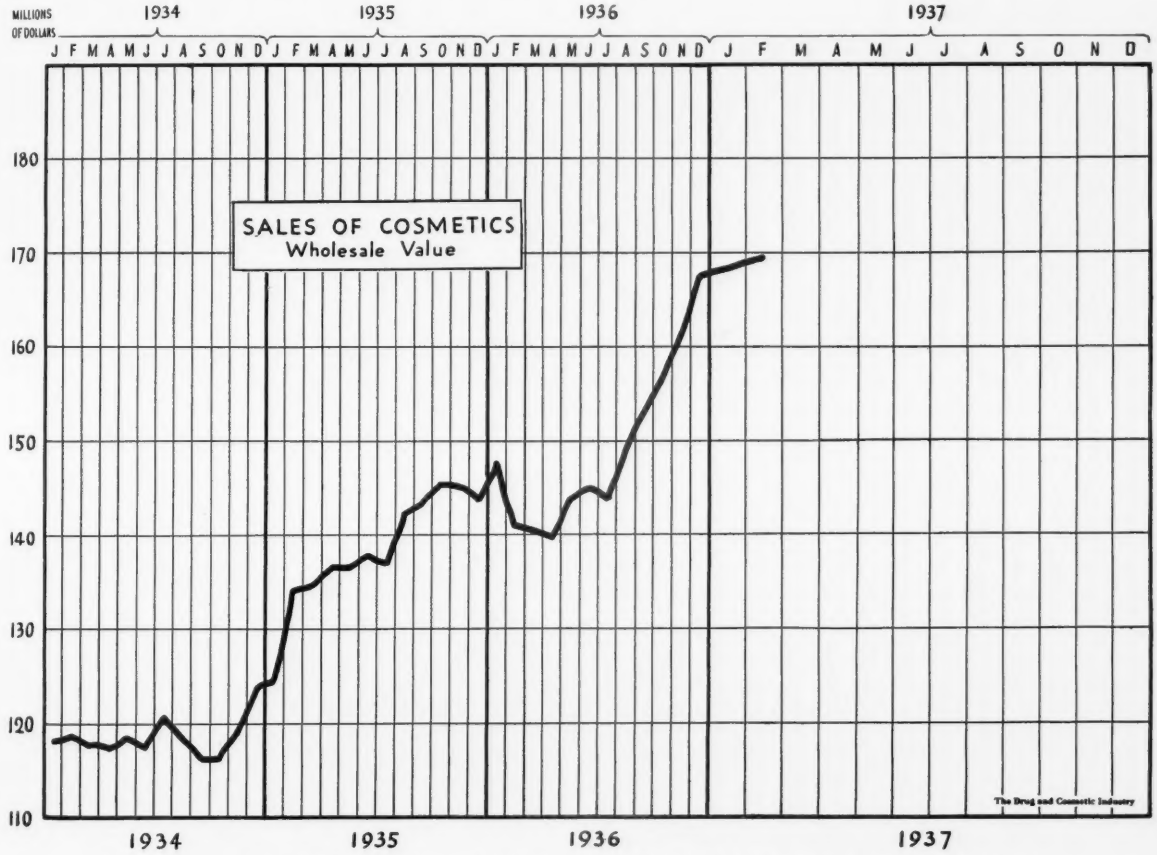
You'll find it easy and economical to increase the sales-appeal of your packages with Armstrong's Metal Caps. You may choose from a wide range of standard designs and colors in both single- and double-shell types. Or at slight additional cost, you may have a cap specially lithographed in clear, bright colors.

In Armstrong's modern factory, cap contours are carefully formed to meet the variations in commercial glass bottle finishes. And, before being packed for shipment, every cap must pass a rigid inspection for correct formation and appearance. As a result, these caps assure a dependable, secure seal; and furthermore, they are easy for the consumer to remove and replace. For complete information, send for your copy of the new closure catalog, "Better Seals for Better Sales." Write Armstrong Cork Products Company, Closure Division, 913 Arch Street, Lancaster, Pennsylvania.

Armstrong's METAL CAPS

MERCHANDISING NEWS

THE TREND IN COSMETICS. Attempts are made in Paris to popularize a dual color hair fashion. Models during the spring dress fashion openings have displayed coiffures, showing the hair in two colors, a differently colored strand of hair is introduced amongst the normally colored hair. There is a chance for its becoming popular this winter. If it does, it will make a new market for hair pencils and concentrated, temporary, rinses for making a dark streak in light hair and bleaches for putting a light streak into dark hair.



The wholesale value of toilet preparations sold in the twelve month period February 1937 was equal to $169,491,000, an increase of about one per cent over the $168,343,000 sold in the twelve months ended January 1937 and about twenty per cent greater than the $140,824,000 sold in the year ended February 1936.

FOR DRUG & COSMETIC PACKAGES

The Riegel Mills offer the widest range of packaging papers available from any one source today. No matter what your paper needs may be, we can either supply them efficiently and economically, or tell you who can. Write for "Case Histories of Packaging." You will find it both interesting and instructive. No charge.

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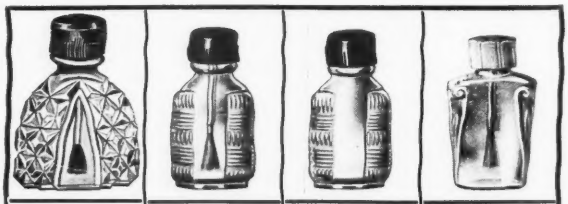
IT WILL PAY YOU TO VISIT OUR SHOWROOM



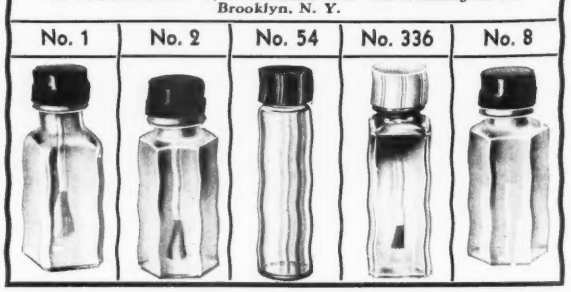
No. 21 | No. 41 | No. 44 | No. 774

Here is a representative assortment of our exclusive designs. These are made of the highest quality, crystal clear, glass bottles. The caps are black bakelite in which we attach the correct liner and genuine quill camel hair brush or metal shank brush to order.

WRITE FOR SAMPLES AND PRICES

GLASS PRODUCTS CO.
GLASSWARE
VINELAND ● NEW JERSEY

ATLANTA, GA. Warren M. Curry 2895 Peachtree St.
NEW YORK L. A. Barber 74 S. Portland Ave. Brooklyn, N. Y.
CHICAGO, Ill. E. Marx & Co. 308 Washington St.



No. 1 | No. 2 | No. 54 | No. 336 | No. 8

Curls prevail and thereby give a new lease to the sale of curling lotions and similar preparations which have been going big these last years.

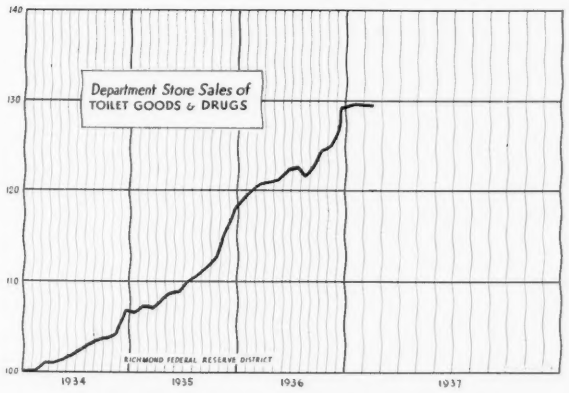
There is a great deal of activity in the men's branch of the cosmetic business. Retailers seem to have realized that they possess a real field of sales expansion in their men customers. This summer will see a strong drive to bring them to the counters. Deodorants may be used as the entering wedge and will be featured as men's articles. Once, after the ice is broken, other articles will be added. The plan is to get the American men away from their present concentration upon shaving articles, talcums and hair preparations and raise conditions in this country to the European level, where men buy practically every article on the cosmetic list. The industry can help by recognizing the existence of the man purchaser upon labels, in advertising literature and in advertisements.

The re-introduction of old fashioned flower scents is looked forward to by retailers. Buyers feel that a change is due in the popular scent preferences and that a swing to these older perfumes will be good for business. They point to the increase in powder sales since the introduction of the new shade varieties. The new eau de colognes with a bouquet base are finding more and more attention in the better trade. Buyers stock them for their novelty appeal.

Retailers are somewhat puzzled what to do with the new cream lotions that are now duplicating the creams of the same maker. Most of them try to sell them side by side, leaving the choice to the customer. What is needed is a convincing sales argument in favor of either. Customers still look upon the lotions as a novelty. With a real sales argument handy it will be possible to sell both to one customer.

Stores report an increasing demand for bulk packages of talcums, bath essences, eau de colognes, and practically every article for which there is a daily consumption. The demand is large enough to make it worth while for stores to feature these articles in window displays. The sales appeal is that of the greater economy of the bulk package. The application "Family size" or "Economy size" is generally used in introducing these packages to the trade.

STAND-UP AND SIT-DOWN PACKAGES. One of the cleverest uses of the package in dealer advertising is currently being made by Admiracion, with their advertising and promotion headed, "Try This Psychological Experiment." The copy goes on to say "Stand the *large* size UP . . . lay the *small* size DOWN," and the photograph illustrates the point which is that "When you show Admiracion, or any other product for that matter, always stand the large size package up and the smaller size down. It's amazing. Tests show that, almost invariably, the large size enjoys a sales increase. Try it."



Sales of toilet articles and preparations by department stores in the Richmond Federal Reserve District were 1.4 per cent lower in February 1937 than in the same month of the previous year. In the city of Baltimore sales were 1.8 per cent lower and were 1.1 per cent lower in the city of Washington. For the district as a whole, the adjusted index for February 1937 was 129.4 compared with 129.5 in the previous month and 119.9 in February 1936.

Sales of toilet articles and drug sundries by department stores in the New York Federal Reserve District were 0.8 per cent greater in February of 1937 than they were in the same month of the previous year. Corresponding adjusted index numbers were 112.0 for February 1937, 111.9 for January 1937 and 99.9 for February 1936.

BOTTLES and JARS

- A full line of bottles and jars always in stock for immediate delivery.
- Available in small or large quantities. Jars: Clear, Opal or Colored, in all standard sizes—any quantity from stock.
- Perfume bottles, standard moulds or special design.
- Lotion bottles—many very attractive designs for your immediate use.
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How to Sell Cosmetics
by
Edyth Thornton McLeod

THIS book was written to help those who have actual sales contacts with the consumer.

Manufacturers, department stores, chain store organizations, will find it invaluable as a textbook in their training departments.

Cosmetic salesgirls, beauty parlor operators, and independent retailers of cosmetics will want this book to increase their effectiveness in cosmetic selling.

To the beauty school and to those who have only considered the cosmetic field as a possible vocation it can be highly recommended.

IT WILL MORE THAN PAY FOR ITSELF in the benefit which should result from its study and the application of the helpful, practical, everyday selling help contained in it.

This book—the first of its kind—has even a wider appeal. To all women it brings a message—THE IMPORTANCE OF PERSONAL LOVELINESS—and many valuable suggestions for personal effective use of cosmetics.

Single copy price $2.00
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THE DRUG & COSMETIC INDUSTRY
101 W. 31st Street New York, N. Y.

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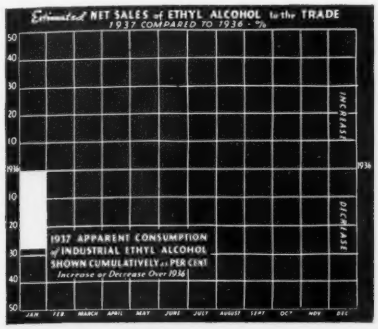
ALCOHOL NEWS

April ★ A Monthly Series of Technical Articles for Chemists and Executives ★ 1937


Estimated NET SALES of ETHYL ALCOHOL to the TRADE
1937 COMPARED TO 1936 - %
INCREASE
DECREASE
1936
1937 APPARENT CONSUMPTION of INDUSTRIAL ETHYL ALCOHOL SHOWN CUMULATIVELY - % PER CENT Increase or Decrease Over 1936
JAN. FEB. MARCH APRIL MAY JUNE JULY AUGUST SEPT. OCT. NOV. DEC.

Apparent consumption of industrial ethyl alcohol from Jan. 1 to Jan. 31, 1937, was 5,244,000 wine gallons. This is 27.4 per cent less than during the same period in 1936 when 7,220,000 wine gallons were consumed.

FOUR S.D. FORMULAE ARE DISCONTINUED BY T.D.

Revocation of four Specially Denatured Alcohol Formulae was made public in Treasury Decision 4727, approved March 4, 1937.

The Decision reads: "Pursuant to authority conferred by the Act of June 7, 1906 (U.S.C., 1934 Ed., Title 26, Sec. 1320), and Title III of the National Prohibition Act, Specially Denatured Alcohol Formulae 11, 26, 31-B, and 31-C are hereby revoked effective May 1, 1937, and alcohol shall not be denatured in accordance with such formulae on or after that date."

Limited Uses

S.D. Formula 11 had been authorized for use in the manufacture of photographic collodion, photo engraving and photo prints; S.D. 26 for use in ethylaniline and diethylaniline, dyes and intermediates; S.D. 31-B and S.D. 31-C for liquid soap, shampoo, shaving cream and tooth paste.

The discontinuance of these four formulae is not expected to cause any inconvenience among the trade because, it is reported, there have been none or virtually no withdrawals against these particular formulae for the past two years. By this revocation, the number of S.D. Formulae is reduced, but there are several others designated for the same uses.

ROTENONE DETERMINATION EMPLOYS ETHYL ACETATE

Utilizing the strong solvent powers of ethyl acetate, a modified method for the determination of rotenone in derris and Mundulea samples has been reported.

Hot percolation for $\frac{3}{4}$ to $2\frac{1}{2}$ hours is substituted for the usual Soxhlet extraction. A weighed amount of pure rotenone is added to all extracted resins in order to bring the content up to at least 40 per cent. Where this content is already up to or above 40 per cent. one gram is added.

It is said that the rotenone may be separated as its carbon tetrachloride complex, whose purity may be determined by stirring with pure alcohol. This usually lies between 91 and 96 per cent with a mean value of 94, it is asserted. Likewise, the purity of the rotenone after alcohol recovery is given as an average of 99.2 per cent.

COSMETIC HOUSES PREPARE FOR BOOM IN SUN TAN LOTION SALES

Foresee Displacement of Oils; Alcohol, Selected Screen And Emollient Will Be Basis of Typical '37 Lotion

A three to four hundred per cent larger market for sun tan preparations looms as cosmetic houses look eagerly to the summer season. Fortified with a background of intensive sales and chemical research, manufacturers are confident that new, scientifically compounded formulae will be the means of lifting sales to a record high.

In all quarters there is general agreement that production schedules and promotional plans must be pushed a notch forward to meet expected demands.

Up to the present year, about 10.1 per cent of all women regularly used sun tan preparations as contrasted with the 66.5 per cent using hand lotions, a recent survey of 33,459 women discloses. This sales lag might be attributed to several factors.

In the eyes of some observers, it has been due at least in part to esthetic drawbacks of older sun tan preparations. Pointing out that various oils are "messy to apply, unpleasant on the skin, and completely unesthetic in appearance," they assert that oils have run their course and that the current season will witness the emergence of solutions and lotions as the most popular brands.

Lotion Formulae

In the face of this predicted ascendancy the question may be asked: what will be the typical lotion of 1937? As represented by recently published formulae, it will be essentially a slightly perfumed solution of a selected screen or filter in about 15 per cent alcohol with the balance water and a desirable emollient as for example, glycerine or one of the glycols. Some tinting medium is usually added. This combination is said to give an invisible, protective film.

Much research has been devoted to selection of the proper screening medium. It is

(*Continued on next page*)

ORAL BACTERIA YIELD TO WASH PROPHYLAXIS

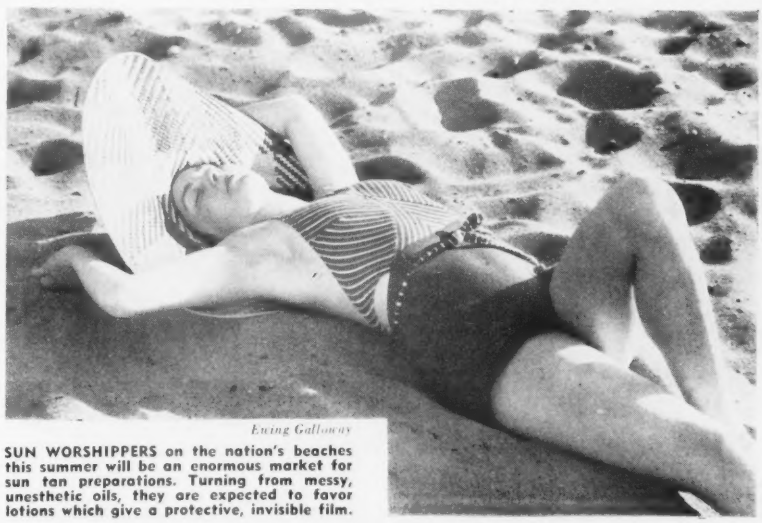
Study Shows Bactericidal Potency In Vivo; Tooth Pastes Also Have Antiseptic Action

Expounding the usefulness of dentifrices and mouth washes in lowering the bacterial count in the mouth, a recent article in the "Journal of the American Pharmaceutical Assn." reports favorably on a group of nationally advertised mouth washes. After four years of experimentation on the antiseptic action of mouth washes, tooth-pastes and tobacco smoke under actual conditions of use, the author reached the following conclusions, among others:

The effect of mouth washes tended to be transient, while effective tooth-paste and brushing had a more lasting antiseptic action. Teeth should be cleaned three times a day, the ratio of mouth bacterial counts being inversely proportional to the number of brushings. Hot tobacco smoke tends to inhibit the growth of mouth bacteria but may irritate the mucous membranes.

Colony of bacteria counts ranging from 70,000 to 2,000,000 per cc were found with 400 students who did not employ mouth-washes. With the use of toothpaste, however, average drops to 10,000 were recorded. The proprietaries showed favorable results at the end of one hour, with plate counts as low as 3,000 viable bacteria per cc of rinse water.

SUN TAN . . . OR . . . SUN BURN?



Ewing Galloway

SUN WORSHIPPERS on the nation's beaches this summer will be an enormous market for sun tan preparations. Turning from messy, unesthetic oils, they are expected to favor lotions which give a protective, invisible film.

ADVERTISEMENT—*This entire page is a paid advertisement.*

U.S.P. AND N.F. ITEMS ARE MOST USED IN Rx

Acetylsalicylic Acid and Soda Bicarbonate Among First Five

Nearly two-thirds of the occurrences in prescriptions are U.S.P. listings, it was brought out in a study of 121,924 prescriptions in various parts of the country. Grouping drugs under the four principal classifications, the survey uncovered the following figures detailing occurrences in prescriptions:

U. S. P. Items	65.19%
N. F. Items	7.92%
Unofficial Items	10.84%
Proprietary Items	16.05%

Asked to estimate the ten drugs most frequently used in prescriptions, the average pharmacologist might be successful in naming four or five in their correct order. The survey, however, cites all ten in the order of most frequent use:

	Occurrences per 10,000 Prescriptions
Water (Distilled Water)	840
Codeine Sulphate	634
Acetylsalicylic Acid	476
Sodium Bicarbonate	353
Acetphenetidin	350
Elix. Pepsin Comp.	324
Sodium Bromide	311
Glycerin	248
Sodium Salicylate	242
Tincture Nux Vomica	235
Ammonium Chloride	208

As was pointed out, nine in the above list are Pharmacopoeial while the other is listed in the National Formulary. Only a few proprietary items were used as often as twenty-five times each in 10,000 prescriptions.

The importance of alcohol to the pharmacist may be judged by the fact two of the items, Tincture Nux Vomica and Elix. Pepsin Comp. are dispensed in ethyl alcohol solution while at least two other products in the list are more readily soluble in alcohol than water.

PREPARE FOR BOOM IN SUN TAN LOTION SALES

(*Continued from previous page*)

not a simple problem. While there are a number of mediums (certain pigments) which may be regarded as virtually opaque to the sunburn producing rays (generally given a range of 2900 to 3200 Angstrom units), their use defeats the avowed purpose of sun tan preparations—that of *producing tan* without burn.

Pigmentation, which has been called the best sunburn preventive of all—the natural defense of the body against sunburn—is desirable. Yet the tan-producing rays (described as lying in the range 3000-3200 Angstrom units) also produce burn.

However, if a small percentage, say 5 per cent, of these rays is allowed to penetrate the skin, it is asserted that erythema (sunburn) may be slowed down until protective pigmentation—or tan—has taken place. To accomplish this, highly specialized screens have been developed.

The ultimate test of course is on the beach or in actual exposure, and manufacturers have not hesitated to conduct numerous trials in this manner. Much valuable information has also been gained by using carbon arc lamps and quartz-mercury lamps and plotting transmission characteristics of the screens.

Some of the materials which have been accorded varying degrees of recognition are aesculin, menthyl salicylate, menthyl benzoate, benzyl salicylate, quinine bisulphate and several specialty compounds. Those which are soluble in mineral or vegetable oils may usually be incorporated in solutions or lotions containing alcohol. Depending upon the type selected, from 1 to 10 per cent is used.

Two of the Specially Denatured alcohol formulae which have been approved for use in lotions are S.D. 38B and S.D. 40. The U. S. Industrial Alcohol Co. supplies both.

The authorized compositions of S.D. Formulae 38B and 40 are given as follows:

38B To 100 gallons of ethyl alcohol add: A total of 10 pounds of a mixture of two or more of the U.S.P. oils and substances listed below:

Oil of wintergreen	Phenol
Methyl Salicylate	Camphor
Oil of cloves or eugenol	Chlorthymol
Oil of peppermint	Safrol, specific gravity not less than 1.096 and not more than 1.110 at 16° C.
Oil of cassia or cinnamon	Volatile oil mustard
Oil of eucalyptus	Oil of turpentine
Oil of rosemary	Oil of citronella, pure
Oil of lavender	Guaicacol
Oil of spearmint	Oil of bergamot
Oil of thyme	Oil of pine or pine needles
Thymol	Phenol salicylate
Menthol crystals	
Oil of sassafras	
Eucalyptol	

Any one desiring to use the above formula must specify in the application which substances from the above list are selected.

40 To 100 gallons of ethyl alcohol add: 3 ounces of the alkaloid brucine or brucine sulphate and ½ gallon of denaturing grade tertiary butyl alcohol.

Nation's Hostelries Burn Solox In Chafing Dishes

Solox, the proprietory solvent of U.S.I., is demonstrating its versatile nature. Long associated with painters—for cutting and thinning shellac—and with garage mechanics (for general cleaning, loosening sticking valves, etc.), Solox is now mingling more than ever with the "smart set" of the country as a burning fluid. Because of its fine "company manners"—Solox burns without objectionable odor and is clean and inexpensive—a growing number of hotels are making it their standard fuel for chafing dishes. Since Solox "knows its place," their Crepes Suzette have the aroma of the brandy and not of the fuel.

TECHNICAL DEVELOPMENTS

The items in this column are gathered from many varied sources. Further information may be gathered by writing to U.S.I.

U S I

High bactericidal and detergent power is claimed for a new type of bottle-washing detergent. The product, developed primarily to satisfy milk-bottle cleansing requirements, is also credited with exceptional water-softening properties.

U S I

Synthetic wax, claimed to be a complete substitute for beeswax in the manufacture of cosmetics, has been developed. Creams compounded with this material are reported to be pure white, stable and more readily perfumed than those made with beeswax.

U S I

Faster wrapping of effervescent powders is claimed for a new model wrapping machine. It is reported that sift-proof, prescription-type wrappers filled with accurately measured doses of effervescent powders and similar drug or food products are dispensed in glassine or other paper at the rate of 4,000 per hour.

U S I

Extended face powder colors have been brought out recently. Products in the new series are used directly in powder and allow small-quantity manufacture without costly equipment, according to the producers.

U S I

A substitute for lemon oil, said to have an extremely low price, is on the market. The manufacturer claims that the product successfully replaces lemon oil completely in many cases and in part for cosmetics, candies, cakes, beverages, ice creams, etc.

U S I

Decorations on glass can be produced in one to four colors, according to the sponsors of a new process. Anything that can be printed on paper can be put on glass with this method, it is claimed.

U S I

Milky permanent wave solutions are said to result from the use of special oils now available. One type is for milky solutions, a second for very milky, and a third for clear, oily solutions.

U S I

A new two dram dispenser for perfumes is on the market. The tube and bulb-type device is said to avoid waste and spillage and to fill any size bottle quickly and accurately.

U S I

Non-stop fillers for small and large bottles were announced recently. The manufacturers of these combination vacuum fillers and cleaners claims that they will work equally as well on viscous products as on light liquids.

U S I

Special labels may be folded and attached to the outside of a container, e.g., the tops of cans, so that they remain unopened and confined on the package surface until ready to be read by the consumer, according to the manufacturer of a new machine. It is said to fit into regular production schedules without requiring additional handling.

U S I

To prevent ether pneumonia a device has been developed in Los Angeles which is reported to preheat the anesthetic so that when it is drawn into the patient's lungs it is a warm gas mixed with air or oxygen. The apparatus consists of an ether container and a hot water thermos jacket.

A folder giving the advantages and many uses of Solox, the general solvent, has been prepared by U.S.I. Write for your copy.

U.S. INDUSTRIAL ALCOHOL CO.

WORLD'S LARGEST PRODUCERS OF INDUSTRIAL ALCOHOL

ETHYL ALCOHOL

SPECIALLY DENATURED-*All Formulas* • COMPLETELY DENATURED-*All Formulas* • ANHYDROUS-*Denatured* • ABSOLUTE-*Pure*

SOLOX-*The General Solvent* • U. S. I. DENATURED ALCOHOL • SUPER PYRO *Anti-Freeze*

PURE (190 PROOF) TAX PAID—TAX FREE

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NEWS

Associations

A. D. M. A. Meeting

Plans for the Twenty-sixth Annual Meeting of the American Drug Manufacturers' Association, to be held at the Homestead, Hot Springs, Va., May 3-6th, are well under way. The meeting of the Scientific Section will take place on Monday, May 3 at 9.00 o'clock, under the chairmanship of H. S. Adams. Interesting features of this meeting will be the report of the Committee on Vitamin Assays, of which Dr. Arthur D. Holmes is chairman. This committee has been engaged in compiling data on the value of the Vitameter for vitamin A assays. In additions four laboratories equipped with Spectrophotometers have been collaborating in studies with this instrument, and their work will constitute part of the committee's report. A further interest of this committee has been the development of methods for commercial assay of vitamin B-containing materials. Dr. David Klein, Chairman of the Committee on Digestive Ferments and Glandular Products, will report on investigations on the Smith-Sorensen Trypsin Method, Assay of Thyroid Tablets, N. F. VI Reference Rennin, Starch Digestive Power of Pancreatin.

The Biological Section will also meet on Monday, May 3 at 9.00 o'clock, under the chairmanship of W. A. Jamieson. The program for this section is: Diphtheria Toxoid, Dr. John F. Anderson; Dosage of Rabies Vaccine, Human, Dr. W. A. Feirer; Bacterial Nomenclature, Dr. L. T. Clark; Antipneumoccic Serum Standardization, S. D. Beard; Preservatives in Biological Products and Methods for Sterility and Safety Testing, Dr. John Reichel. Dr. W. T. Harrison, Chief, Division of Biologics Control, National Institute of Health, will take place in the discussions. Other subjects to be discussed are: Anaerobic Antitoxins; Datings on Exported Biologicals; Antidysenteric Serum Standardization; Sensitivity Tests; Typhoid Vaccine; Rabies Vaccine, Veterinary.

The Pharmaceutical Section will meet at 3.00 P. M. on Monday, May 3, under the chairmanship of Dr. Paul S. Pittinger. Reports to this meeting will be: Contact Committee, Dr. J. Paul Snyder; Committee on Catalog Simplification, Dr. Ward J. Rice; Committee on Hydrogen-ion Concentration, Dr. F. W. Heyl; Subcommittee on Digitalis, Dr. F. O. Taylor.

A. C. BOYLSTON

Report of the Contact Committee will include the activities of the last year. Four meetings have been held since the last convention, much of the work pertaining to the U.S.P. and N.F. Report of the Hydrogen-ion Concentration Committee will include a series of studies made to test the uniformity of hydrogen-ion determination carried out in the laboratories of committee members.

The first general session will be held on Tuesday, May 4 at 9.00 A. M. At this meeting the reports of the President, Executive Vice-president and Secretary, and the Treasurer will be given, as well as other important committee reports.

The Committee on Sales Advertising Problems, under the chairmanship of R. E. Horn, will meet Thursday, May 6, at 9.00 A. M. Features at this session are: Problems of the Retailer of Interest to the Manufacturer, Dr. George Louis Secord, President of National Association of Retail Druggists; Problems of the Wholesaler of Interest to the Manufacturer, I. H. Bander, Vice-president and General Sales Manager, McKesson & Robbins.

Entertainment is being handled by a committee under the chairmanship of James J. Kerrigan, of Merck & Co. Subcommittees named by Mr. Kerrigan are: Transportation: Robert B. Magnus, of Magnus, Mabee & Reynard, and James C. Chilcott, of The Maltine Company; Tennis: S. Barksdale Penick, of S. B. Penick & Co., and Gerald S. Furman, of Merck & Co.; Golf: Victor E. Williams, of Monsanto Chemical Co., Herman J. Dietel, of Merck & Co., and J. P. Remensnyder, of Heyden Chemical Corp.; Ladies Entertainment: George Simon, of Heyden Chemical Corp., A. A. Wasserscheid, of Mallinckrodt Chemical Works, and James T. Pardee, of The Dow Chemical Co.; Banquet: F. J. McDonough, of New York Quinine & Chemical Works, and M. N. DeNoyelles, of Chas. Pfizer &, Co.; Evening Entertainments: William D. Barry, of Mallinckrodt Chemical Works; Publicity: A. D. Armstrong, of Fritzsche Brothers.

Michigan Spelling Bee

The Allied Drug and Cosmetic Association of Michigan held a spelling bee at its March 24th meeting. Harry F. Jackson of Frederick Stearns & Co. presided. W. Elliott, chairman of the entertainment committee, outlined the plans for summer golf tournaments and also for the entertainment of the Chicago Drug & Chemical and the Chicago Soap, Perfumery & Extract Associations in September.

F. W. D. A. Meeting

Federal Wholesale Druggists' Association will hold its annual meeting on September 21, 22, 23, 24, at the Hotel Cleveland, Cleveland, O.

BEAUTIFUL *but* WISE

"Who Pays for the Permanent Package?"

SHE ASKS

Smart lady, typical of millions! She has a sense of beauty, but also a sense of value. She likes a fine package, of course. But not if it means a higher retail price to her. And she has learned that *she* pays for the *permanent* package—the so-called "*re-use*" type of box. She asks herself: "Why Should I?"

That's why the set-up paper box remains the package of popular appeal. It combines beauty with economy. That's why manufacturers find it unwise to change to other types of packages. Only with a set-up paper box can they get a smart, modern effect—*at low cost!* That's why a Package by Ritchie is an effective merchandising medium. It gives your product a flair that makes people want it, without raising the price to more than many people are willing to pay for it.

"Packages That Sell" by Ritchie are Outstanding in these Fields:

Auto Accessories	Coffees, Teas and Spices
Batteries	Drugs
Chemicals	Food Products
Cosmetics	Pens and Pencils
Clocks and Watches	Golf Balls
Granular Products	Hosiery
Jewelry	Playing Cards
Perfumes	Toiletries

Many nationally-known products gain additional sales-appeal through a Package by Ritchie. Many nationally-known firms have long been Ritchie customers — some of them for nearly half a century. Why don't *you* investigate the many advantages of a Package by Ritchie?

W. C. RITCHIE AND COMPANY 8847 BALTIMORE AVENUE CHICAGO

NEW YORK PHILADELPHIA DETROIT CINCINNATI LOS ANGELES ST. LOUIS MINNEAPOLIS FT. WAYNE

C. D. Smith Heads A. P. M. A.

Carroll Dunham Smith, of the C. D. Smith Pharmacal Co., was elected President of the American Pharmaceutical Manufacturers' Association during the recent convention of the Association held at St. Petersburg, Fla., March 22-26. Other officers elected are: First Vice-president, H. B. Johnson, of the Zemmer Co.; Second Vice-president, L. D. Humphrey, of G. F. Harvey Co.; Secretary, Fred L. Lawson, of The E. L. Patch Co.; Members of the Board of Directors, George R. Flint, of Flint, Eaton & Co.; Carle M. Bigelow, of Calco Chemical Co.; and E. S. Paisley, of National Drug Co.

C. D. SMITH

The meeting was particularly well attended and a new record for the number of members attending an annual meeting was established. Greeting of the American Drug Manufacturers' Association were brought by President Arthur C. Boylston; the National Drug Trade Conference was represented by President Carson P. Frailey; and the Drug, Chemical & Allied Trades Section of the New York Board of Trade was represented by Chairman Joseph L. Huisking.

The Association passed a resolution approving the Copeland Bill, S. 5, and urging its enactment in the form in which it passed the Senate.

Charles Wesley Dunn, Counsel of the Association, gave a brilliant talk on problems before the industry. He also spoke at some length on the proposal to reform the Supreme Court, roundly condemning the President's proposal.

New Phila. Chem. Club Members

At the February meeting of the Chemical Club of Philadelphia eight new members were added: Ralph Clark, of the J. T. Baker Chemical Co.; Lawrence S. Ford, of Ford Bros. & Co.; Kenneth G. Hewitt; William F. Kiefer, of Fritzsche Bros.; Fred E. Loud, of the Murray Oil Products Co.; W. W. Quarles of "Chemical and Metallurgical Engineering"; Morris C. Swope, of the Alex. C. Fergusson Co., and Rod Tompkins of Loos & Dilworth, Inc.

Proprietary Assn. Convention

The 55th annual convention of the Proprietary Association will be held May 25, 26, and 27, at the Hotel Biltmore, New York. A dinner for members of the Executive Committee will be held on the evening of May 24. Frank A. Blair, president of the Association, will preside at the general sessions.

Departmental sectional meetings will be presided over by William Y. Preyer, chairman of the Advisory Committee on Advertising; Dr. George F. Reddish, chairman of the Scientific Section; Joseph D. Bohan, chairman of the Foreign Trade Section; and Edward Gunst, chairman of the Veterinary Section.

Following are members of the Executive Committee; R. R. Land, William Y. Preyer, Charles S. Beardsley, Robert L. Lund, Geo. H. Miller, Fred E. Rathburn, Alvin G. Brush, H. Smith Richardson, and Z. C. Patten, Jr.

Vanilla Bean Assn. Elects

At the annual meeting of the Vanilla Bean Association of America, Inc., held at the Hotel Lafayette, New York, the following officers were elected: Henry Saloman of F. Huber & Co., president; E. S. Buckley of Thurston & Braidich, vice-president and J. Manheimer, treasurer. Directors elected were: Francis T. Dodge of Dodge & Olcott Co., William Schilling, Jr., of Norda Essential Oil & Chemical Co., and Chester A. Smeltzer of Dammann & Smeltzer, Inc.

Lichtenberg Heads Salesmen

At a meeting of the Salesmen's Association of the American Chemical Industry, the following officers for the coming year were elected: Charles Lichtenberg of the Commercial Solvents Corp., president; Charles E. Kelly of Hagerty Bros. & Co. vice-president; DeWitt Thompson of the Mathieson Alkali Works, secretary; J. M. Wafer of the Industrial Chemical Sales Co., treasurer. Members of the executive committee elected for three years are: A. A. Wasserscheid of the Mallinckrodt Chemical Works and W. D. Merrill of Joseph Turner & Co.

T. G. A. Convention

The annual convention of the Toilet Goods' Association will be held at the Hotel Biltmore, New York, May 25, 26 and 27. Charles E. Kelly, chairman of the entertainment committee, has announced that the following committee will be in charge of the convention: A. C. Burgund of Carr Lowrey Glass Co., W. D. Barry of Mallinckrodt Chemical Works, Charles Fischbeck of Charles Fischbeck Co., B. J. Gogarty of Commercial Solvents Corp., W. E. Klaas of Chase Brass Co., M. Lemmermeyer of Aromatic Products, Inc., W. P. Murray of Continental Can Co., L. R. Root of Scovill Manufacturing Co., and Karl Voss of Karl Voss Corp.

Regulatory

N. Y. Fair Trade Upheld

Reversing its previous position in view of recent Supreme Court rulings, the Court of Appeals on March 9, upheld the New York Fair Trade Law, which it had declared unconstitutional on January 7, 1936. The Supreme Court has sustained similar legislation in California and Illinois. The suit decided on March 9 was brought by the Bourjois Sales Corp., which sought and is now to receive an injunction prohibiting a Brooklyn druggist from selling Bourjois products at a price below that stipulated in contracts.

Maine Reports 41% Registered

Dr. E. W. Campbell, director of the division of Sanitation of the Maine Health Department has stated that 42 cosmetic preparations have been refused registration in that state, 100 cosmetic formulas have been changed to conform with the state law and a total of 5,676 items have been registered.

Washington Drug Bill Vetoed

The state food and drug bill which was passed by the Washington state legislature in the face of the industry's opposition has been vetoed by Governor Clarence D. Martin. The fight against the measure was led by the Washington State Pharmaceutical Association.

North Dakota Drug Bill

A bill which re-defines adulterations and widens application of the term "misbranded" to drug packages with deceptive labels has been passed by the North Dakota legislature and signed by Governor William A. Langer.

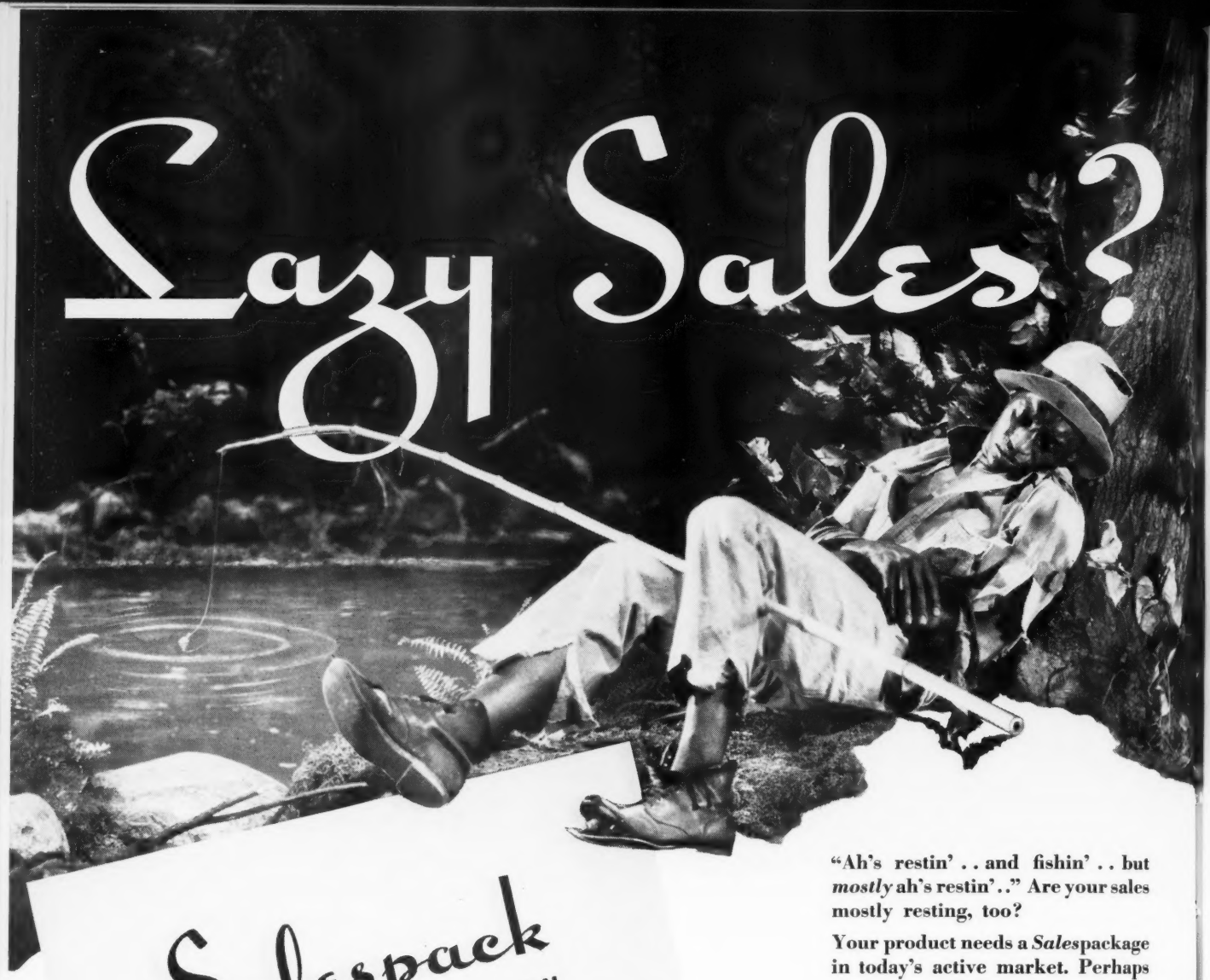
Wisconsin Tax Postponed

A bill sponsored by the League of Municipalities to produce $3,000,000 to aid Wisconsin schools by a 20 per cent. tax on cosmetics and cigars was recommended for indefinite postponement by the Assembly education committee following a hearing.

Penn. Would Restrict Mfr.

A bill has been introduced in the Pennsylvania legislature which would require that all drugs, toilet articles and dentifrices packaged in the state be manufactured and packed under the supervision of a registered pharmacist.

Lazy Sales?



"Ah's restin' . . and fishin' . . but *mostly* ah's restin'. ." Are your sales mostly resting, too?

Your product needs a *Sales*package in today's active market. Perhaps you've noticed that many products setting a lively pace in sales . . are *Sales*packaged by Owens-Illinois! In your plans to step out after new volume in drugs and cosmetics, *start right*—with Owens-Illinois *Sales*packages for all your products. This assures the *Sales*-styling of container, label, closure and carton . . *under the experienced eye of* Owens-Illinois Complete Packaging Service. For full details get in touch *with your nearest Owens-Illinois* branch office.

OWENS-ILLINOIS GLASS COMPANY
TOLEDO, OHIO

Salespack YOUR PRODUCTS IN OWENS-ILLINOIS GLASS

U. S. P. Supplement

Delay in the issuance of the U.S.P. Supplement has been due to changes in plans for binding. Originally to be issued with a stout paper cover, enclosed in a strong spring-back binder capable of holding future supplements, the supplement is now to be issued in a more substantial but flexible cover costing less than the spring-back binder. For those who desire the spring-back binder, it will be available.

The supplement will be known as the "First Supplement to the Pharmacopoeia of the United States, Eleventh Decennial Revision." It may not be necessary to issue supplements annually, but they will be published whenever the number of new interim revisions justify their publication. Delay in release of the "First Supplement" will necessitate an advance in the date when the new standards become official. Price of the "First Supplement" is $1.00.

E. F. COOK

Cinchona Institute Formed

Cinchona Products Institute, Inc., 270 Madison Ave., New York, has been established to cooperate with anyone interested in the use and application of products derived from cinchona bark, both quinine and other alkaloids, and to foster both medical and industrial research on these products. Norman Taylor is in charge of the work of the Institute.

People

Hogstad Establishes Business

Anton Hogstad, Jr., chairman of the National Pharmacy Week committee, who has served as special assistant to the president of Merck & Co., Inc. during the past six years, has resigned to establish Anton Hogstad Associates, 136 Liberty St., New York. Anton Hogstad Associates will render the professionally-minded pharmacists of the United States and Canada a distinctive and exclusive type of professional service relative to the planning, conduct and development of American pharmacies.

E. H. Rauth, associate to Douglas Wakefield Coutlee, director of advertising and editor of the Merck Report, has also resigned and is associated with Mr. Hogstad.

Richland, Gemloid V. P.

Philip Richland has been appointed vice-president and general sales manager of Gemloid Corp.

Henriksen Joins Gillette

Arthur Henriksen, recently of Polak & Schwarz, is now associated with the Gillette Safety Razor Co. as perfumer and in charge of development of new products.

ARTHUR HENRIKSEN

Mr. Henriksen, who is well known in the aromatic chemical industry, was in business under his own name prior to his connection with Polak & Schwarz, and prior to that was associated with Norda Essential Oil & Chemical Co., Colgate-Palmolive-Peet, and the National Toilet Goods Company.

Eugene Muller Visits Here

Eugene Muller, general manager and director of J. Mero & Boyveau, Grasse, France is making his annual visit to the United States. While here he is making his headquarters with his American agents, Dodge & Olcott Co. Mr. Muller will remain in this country about two months visiting his friends in the eastern and middle western states.

Bonham Joins American Druggist

Kenneth A. Bonham, secretary and treasurer of the Druggists Supply Corp., New York, has resigned to become executive editor of "American Druggist." He will assume his new duties May 1.

Bloom Nuptials

Mr. and Mrs. B. I. Bloom announce the marriage of their daughter, Ann Elizabeth to Phillip Hume Rosenbach, at their home, 951 Hyde Park Blvd., Chicago, on April first. Mr. Bloom is the well-known Coty field executive.

Kinsella on Ritchie Board

Joseph C. Hearn, president of Harold F. Ritchie & Co., Inc., New York, announces the election of E. W. Kinsella to membership on the Board of Directors. He has been with the Ritchie organization for five years and, during the last two, he has been in charge of sales of toiletry products.

P. C. Magnus to Serve

Percy C. Magnus, president of Magnus-Mabee & Reynard, Inc., New York, is chairman of the drugs and pharmaceuticals committee of the 1937 citizen's appeal for the Salvation Army. Edward A. Olds, Jr., president of Packer's Tar Soap, Inc., is vice-chairman.

Rosenthal to Europe

Herman H. Rosenthal of H. H. Rosenthal Co., Inc., sailed for Europe April 7. He will visit a great many European companies in order to contact his varied connections.

Lubarsky to Europe

Simon Lubarsky, President of the International Vitamin Corp., New York, sailed on the Ile de France, April 1, on an extended European business trip.

Snideman Elected Director

R. L. Snideman, of American Coating Mills, Inc., has been elected a director of the Folding Paper Box Association of America, Western Division.

Flory Joins Admiracion

Hubert H. Flory is to handle the sales promotion for Admiracion Laboratories, Inc., Harrison, N. J. Plans for Admiracion advertising during 1937 call for an expenditure equal to the total appropriations during the past three years. Mr. Flory was formerly advertising manager of Dickson & Eddy.

A. R. L. Appoints Dowe

Frank Dowe, Jr., has been appointed sales manager of American Research Products, Inc.

Marshall Anton Mundheim

Mr. and Mrs. Marshall Mundheim have announced the birth of a son, Marshall Anton, at the Doctors Hospital, New York, March 7. Mr. Mundheim is vice-president of Lightfoot Schultz, Jaquet and Antoine.

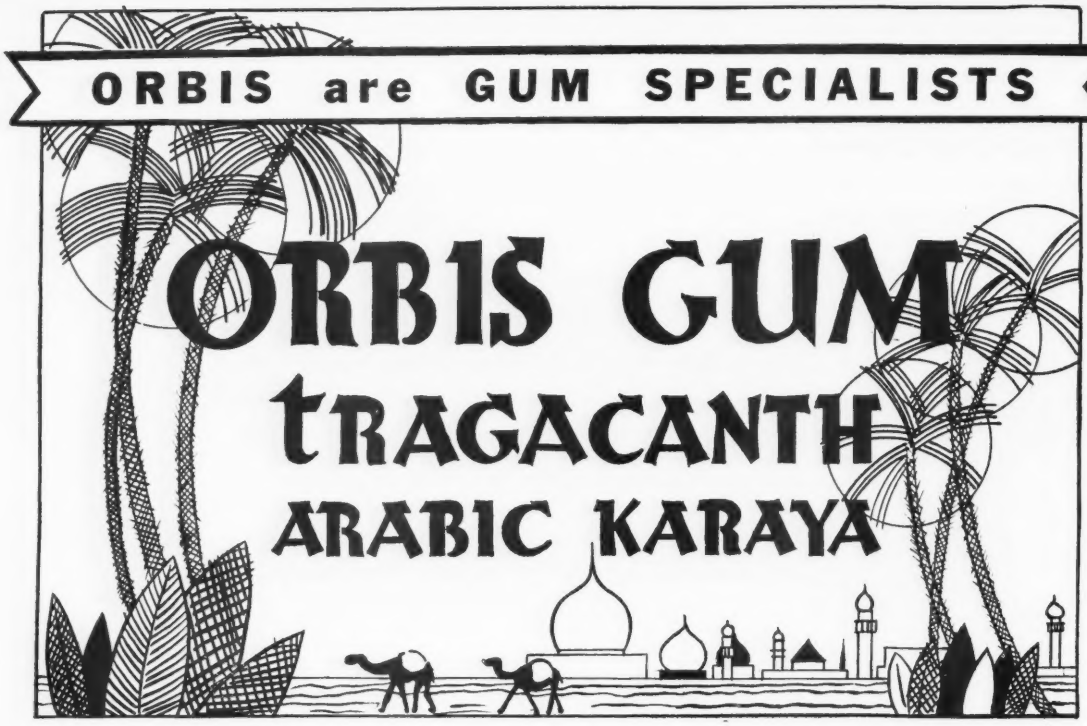
Johnson-Rubinstein Director

Harry T. Johnson, general sales manager of Helena Rubinstein, Inc., has been elected a member of the board of directors.

Leppert to Ohio

John C. Leppert of the Columbia Alkali Co. has been transferred to the company's plant at Barberton, Ohio.

ORBIS are GUM SPECIALISTS



Every purchase of GUM* from ORBIS is backed by knowledge and expert experience of forty years standing—both in America and in the country of origin. Many of the personnel have spent a lifetime in this industry.

ORBIS imports directly, selected GUM TRAGACANTH from Persia.

Astute knowledge of values, seasons, and localities together with constant contact with individual commission merchants assure you that the GUMS you buy from ORBIS will come from sections producing the finer natural raw gum.

ALL ORBIS GUMS* are milled at the modern ORBIS factory at Newark, N. J. Here too, long experience guarantees satisfaction for your most exacting technical requirements.

***ARABIC, TRAGACANTH, KARAYA,**
Whole or Powdered

ORBIS

PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK - FACTORY & LABORATORY, NEWARK, N. J.

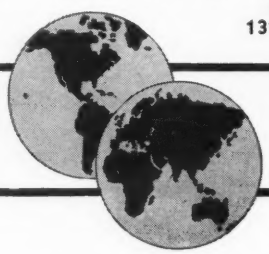
CHICAGO
844 Rush St.

PHILADELPHIA
253 Bourse Bldg.

BOSTON
131 State Street

LOS ANGELES
742 So. Hill St.

Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
Thymol	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss



Companies

Schieffelin Elects Officers

Schieffelin & Co., held their annual meeting March 1 and elected the following directors for the coming year: Clarence D. Bailey, Frederic A. Burlingame, Charles C. Caruso, James C. Kennedy, Jr., Henry S. Livingston, Frederick Osborn and W. J. Schieffelin, Jr.

The officers elected for the coming year are: W. J. Schieffelin, Jr., president; Henry S. Livingston, first vice-president and secretary; Clarence D. Bailey, second vice-president; Charles C. Caruso, third vice-president; Ronald Helps, fourth vice-president; Sturgis S. Wilson, treasurer; Edward B. Livingston, assistant to the president and general sales manager; W. H. Frame, Jr., assistant vice-president and Charles S. Dodge, assistant treasurer.

Pine Tree to be Sold

In accordance with an order of the United States District Court for the District of New Hampshire, all of the property and property rights of Pine Tree Products Co., Inc., will be offered for sale at public auction at the Post Office Building, Concord, N. H., on April 22. Any and all trade-marks owned by the Pine Tree Products Co., Inc., will be included. The sale will be made subject to any right which Allen B. Wrisley Distributing Co. may have under conracts of theirs with Pine Tree Products Co., Inc., to manufacture and sell a limited quantity of Pine Tree Soap on account of indebtedness of Pine Tree Products Co., Inc. to them under said contracts.

Phillips Plant Extended

A $50,000 addition to the Chas. H. Phillips Chemical Co. has just been completed in Glenbrook, Conn. This expansion was made necessary by the large scale production of Phillips' Milk of Magnesia Face Creams and the recently acquired Haley's M. O.

National Adhesives Builds

A two-story brick and steel building is being constructed at 36th Place and Washtenaw Ave. in Chicago by the National Adhesives Corp. Upon its completion the western division headquarters of the company will be moved to the new building.

Novodine Co. Formed

Dr. Raymond L. High has announced the formation of the Novodine Co., manufacturing chemists, at 410 E. Rittenhouse St., Philadelphia.

Primrose House Moves

The executive offices of Primrose House have been moved to 111 Eighth Ave., New York.

Archer Drug—New Jobber

The Archer Drug Co., 113-115 East Markham St., Little Rock, Ark., a new wholesale drug company, began operations April 10. The president of the new firm is E. M. Archer and associated with him are G. S. Paschal, vice-president and general manager, formerly with the Hessig-Ellis Drug Co., and W. O. Thompson, secretary. P. R. Renfrow will have charge of city sales and J. D. Hill, Jr. will be merchandising manager.

The corporation is capitalized at $200,000, all of which is local capital.

Baker Sales Meeting

The J. T. Baker Chemical Co., Phillipsburg, N. J. held its annual three-day sales meeting at the Hotel Easton in Easton, Pa. R. A. Clark, general sales manager of the company presided at the meeting and among the out of town speakers were Dr. C. O. Ewing of the United Drug Co. of Boston; Dr. J. J. Nichols, Director of the Iodine Educational Bureau, Inc.; and S. B. Wildrick, vice-president of Wildrick & Miller, Inc., director of the Baker advertising and sales promotion program.

Abbott Elects Officers

At a meeting of the stockholders of the Abbott Laboratories, North Chicago, Ill., all of the directors were reelected for the coming year with the exception of Jay Dunne who has resigned. C. A. Thornburg, comptroller of the company was elected to fill the vacancy.

The following officers were re-elected at a meeting of the directors: E. H. Ravenscroft, chairman; S. DeWitt Clough, president; Rolly M. Cain, executive vice-president; James F. Stiles, Jr., vice-president and treasurer; Dr. Ernest H. Volwiler, vice-president in charge of research; Alfred W. Bays, secretary and general counsel and Adolph H. Wolff, assistant treasurer.

M. M. & R. Brochure

Magnus, Mabee, & Reynard Inc., New York, has issued an attractive "step-leaf" brochure in colors. There are sections devoted to Mohawk brand soluble extract coffee, aromatic chemicals, microscopic specialties and terpeneless oils, balsams, paragon olive oil, Mohawk brand peppermint oil, concentrated flavors, perfume oil and essential oils. The brochure is illustrated by nine photographs taken in the company's plant.

Kimco Follies

Over one hundred and fifty members of the Kimco Club, which is composed of employees of the Kimble Glass Co., Vineland, N. J., took part in the "Kimco Follies" which the club presented on two successive evenings to very enthusiastic audiences.

Baume Bengue Agrees With FTC

The case brought against Thomas Leeming & Co. by the Federal Trade Commission has been settled and the company will discontinue certain practices which the commission considered unfair. The corporation will cease representing that "Baume Bengue" will allay or relieve pain in any part of the body except the area of application, that it will stay in the area where it is applied until the pain is banished or that it will penetrate deeper or through muscles to the pain itself. The claim that "Baume Bengue" is the only "true" baume analgesique also will be discontinued.

Monsanto Sends Schuler to Coast

Ed. Schuler, assistant manager of the New York office of Monsanto Chemical Co. has been made manager of the Pacific Coast district office in San Francisco, succeeding Charles L. Fetzner. Mr. Fetzner, who has been at the San Francisco office for several years will now be located at the company's main office in St. Louis.

Pittsburgh Plate Elects Asplundh

At a meeting of the directors of the Pittsburgh Plate Glass Co., E. T. Asplundh, assistant to the vice-president of the Columbia Chemical Division of the Pittsburgh Plate Glass Co., was elected as director to fill the place made vacant by the death of Edward Pitcairn.

Aridor Representatives

The Aridor Co., Chicago, has announced the appointment of the following representatives: Los Angeles and Environs, R. G. F. Byington, 1709 West 8 St., Los Angeles; eastern Pennsylvania, southern Delaware, Maryland, Virginia and District of Columbia, Carl J. Loveland, 317 Bourse Bldg., Philadelphia and New York and vicinity, E. J. Schuellein, 50 Church St., New York. All of these new representatives have been associated with the packaging industries for several years.

Upjohn to Build Warehouse

A new warehouse is being planned by the Upjohn Co., adjacent to its Kalamazoo plant. The building will occupy a space 150 by 500 feet.

Vick Advances Preyer

William Yost Preyer, who has been associated with the Vick Chemical Co. for twenty years, has been elected to fill the newly-created post of executive vice-president. For a number of years he has been a member of the executive committee of the Proprietary Association and for the past two years has been chairman of the advisory committee on advertising.

Two new directors have been chosen: George R. Dawson, a vice-president of the company, and E. G. Michaels, controller.

M. M. & R. Appoints

Magnus, Mabee & Reynard, Inc., announces appointment of Richardson Agencies Limited as sole representatives of MM&R Essential Oils, concentrated flavors and perfuming materials in the Dominion of Canada.

F.G. Robin, export manager of MM&R, says "the growing market for MM&R essential oils in Canada has prompted the appointment of Richardson Agencies Limited. This company has had long experience in the merchandising of drug, pharmaceutical and allied products." Offices of Richardson Agencies Limited are at 454 King Street, Toronto, Canada.

Gifts to Columbia University

President Nicholas Murray Butler of Columbia University has reported that the following gifts have been received by the university: $2,400 from the Marinello Corp. to provide the salary of a research assistant in the department of chemistry; $2,250 from E. R. Squibb & Sons, an addition to the Squibb fellowship fund in the department of biological chemistry; $1,000 from the Chemical Foundation for research in biological chemistry and an anonymous gift of $700 for research in organic chemistry.

Arrid Non-injurious

Arrid, a cream deodorant to stop perspiration, manufactured by Feminine Products, Inc., has been awarded the Textile Approval Seal of the American Institute of Laundering to certify that it is non-injurious to textiles.

The laundry industry's approval of Arrid is in connection with the laundry-owners campaign to combat an increasing number of fabric damage complaints caused by deodorants and their improper use. The certification of Arrid means that it can be properly or improperly used and still not be harmful to fabrics.

Stearns Mucilose Granules

Frederick Stearns & Co., Detroit, has announced that it is now offering its Mucilose Plain in a new form—Mucilose Granules. The granules are cereal-like in appearance and taste, and are cinnamon-flavored. They are very easy to take as they may be added to milk or fruit juices, or even sprinkled on the breakfast food. Both Mucilose Plain and Mucilose Granules are claimed to supply bland, non-irritating bulk, without leakage, without impairing digestion.

Thompson Co.—Vitamin Firm

The William T. Thompson Co. has been formed at 1240 S. Main St., Los Angeles. The company will manufacture a line of vitamin products in tablet form.

Vitamins, Inc. Formed

The organization of a new company, Vitamins, Inc., 2626-2630 S. Dearborn St., Chicago, has been announced. The company is specializing in "Campsie process" Vitamin D, irradiated ergosterol, produced under U. S. Patent No. 1,980,971 and Canadian Patent No. 351,916. The product is already being used in cosmetics, toilet soaps and food products.

Harker Catches Record Fish

Harvey M. Harker, Assistant General Manager of Sales of Monsanto Chemical Co., established a new world's record when he landed a 106 pound amberjack off Pass-A-Grille, Florida, on March 21, while attending the meeting of the American Pharmaceutical Manufacturers' Association. The previous record, which stood for 20 years, was a 95 pound amberjack caught off Long Key in 1916.

With Mr. Harker in the boat piloted by Capt. Kenneth Merry, were four men attending the convention, namely, L. A. Watt, C. W. Merrell, P. E. Tillman, and B. F. Ascher. At one point in the 37 minute battle, Capt. Merry's boat was forced to follow a run of more than 700 yards. Mr. Harker has been fishing in these waters for six years, and last February accompanied the same Captain on a fishing trip which brought in 638 pounds of kingfish.

Apologies to White's

White's Cod Liver Oil Concentrate was shown on page 362 of our March issue, and this was described on page 363 as a 25 cent bottle. As a matter of fact the bottle is a 25 cc. bottle, which retails for $2.50.

Trautman Sells Interest

Walter J. Trautman announces his resignation as President and General Manager of Allied Industrial Alcohol Corp. and disposal of his interests. He is shortly returning to his permanent home in New Orleans at which time will announce his new plans.

L. A. Chiris Visits

Leon A. Chiris, administrateur-delegue of etablissements Antoine Chiris, of Grasse, France, is spending about a month in this country.

Mr. Chiris is chairman of Antoine Chiris Co., New York, whose president is Louis Rapin. He will meet Jean Gondran, graduate chemist of the University of Lyons, France, and manager of the Grasse factories, who has been appointed General Manager of Antoine Chiris Co.

Gabriel Jose Fajardo

Gabriel Jose Fajardo died at his home in Upper Montclair, N. J., March 1, of pneumonia. Mr. Fajardo, who was sixty-nine years old, was an importer and exporter of drugs in New York.

Ertel Visits Farrow & Jackson

Fred Ertel, of Ertel Engineering Corp., New York, recently returned from a trip to Europe, having visited Farrow & Jackson, Ltd., of London, which firm is the English representative of Ertel Engineering Corp.

While Mr. Ertel was visiting this firm, a dinner was given in honor of Fred Smith, foremen of the works of Farrow & Jackson, who was retiring after fifty years of service. Numerous employees of the firm

FRED ERTEL

with service records of twenty to fifty years of service with the firm.

The company's history goes back to its founding in the reign of King George III, in 1798 by Benjamin Farrow, carrying on during successive partnerships until registration in 1897 as a private limited liability company. The company held the Royal Warrant of Appointment to His Late Majesty King George V, and previously to their late Majesties King Edward VII, and Queen Victoria.

Letters Patent was granted to the firm in the reign of King George IV in 1826. Other patents were granted in 1870 and 1872 by Queen Victoria.

Maison Carrée Enters This Market

Maison Carrée, Paris, has entered the American market with a complete treatment line of toilet preparations, perfume and toilet waters. A factory has been established in Brooklyn and New York offices and showrooms will be ready in the near future. Samuel Tinsky has joined the organization in an executive capacity.

Jergens Soap With Vitamin F

The Andrew Jergens Co., Cincinnati, has introduced toilet soaps containing vitamin F. The package bears the legend, "Now contains Vitamin F" and vitamin F is stamped on each cake along with the name of Jergens and the odor.

Kleen-O-Dent Laboratories

Kleen-O-Dent Laboratories, Inc., Newark, N. J., has been formed to manufacture a dental cleanser.

MARKETS---*like Seasons* CHANGE!

THE pharmaceutical successes of yesterday are threatened by today's chemical research. Frequent advances, revolutionary improvements in both pharmaceutical and medicinal chemicals—these demand that the buyer be ever alert. Today—as never before—the public learns from a dozen news sources of the steady march of progress. The public expects the finest. Markets change like the seasons.

Over a period of more than 30 years, the research chemist has learned that Baker's Analyzed Reagents mean chemical purity—exactness into the decimals. Of recent years, more and more manufacturers of pharmaceuticals have learned to their profit that Baker's Fine Chemicals also mean measured purity—even by the ton.

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We invite you to discuss your requirements in fine chemicals with the Baker salesman. You will find him a worthy representative of the entire Baker organization. Ask for test samples to meet your specific needs.

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¶ LET'S FACE THE FACTS! Every chemist knows there are two bed-rock facts he must be sure of in Precipitated Chalk. Chemical Purity is one, because, with purity his formula never varies and is always under absolute control, so far as the chalk is concerned.

¶ Uniformity is the second, because, uniformity in the specific grade adopted is necessary for control of the batch and ability to produce a uniform product at all times. Sturge's Standard Precipitated Chalk has met these requirements for 50 years.

¶ No amount of talk can replace the confidence and feeling of security experienced by the man who consistently specifies Sturge's Standard Precipitated Chalk.

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CAPS

"THEY'RE THE TOPS!"

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Cubistic

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Victor Metal Products Corp'n

196 Diamond St. Brooklyn, N. Y.

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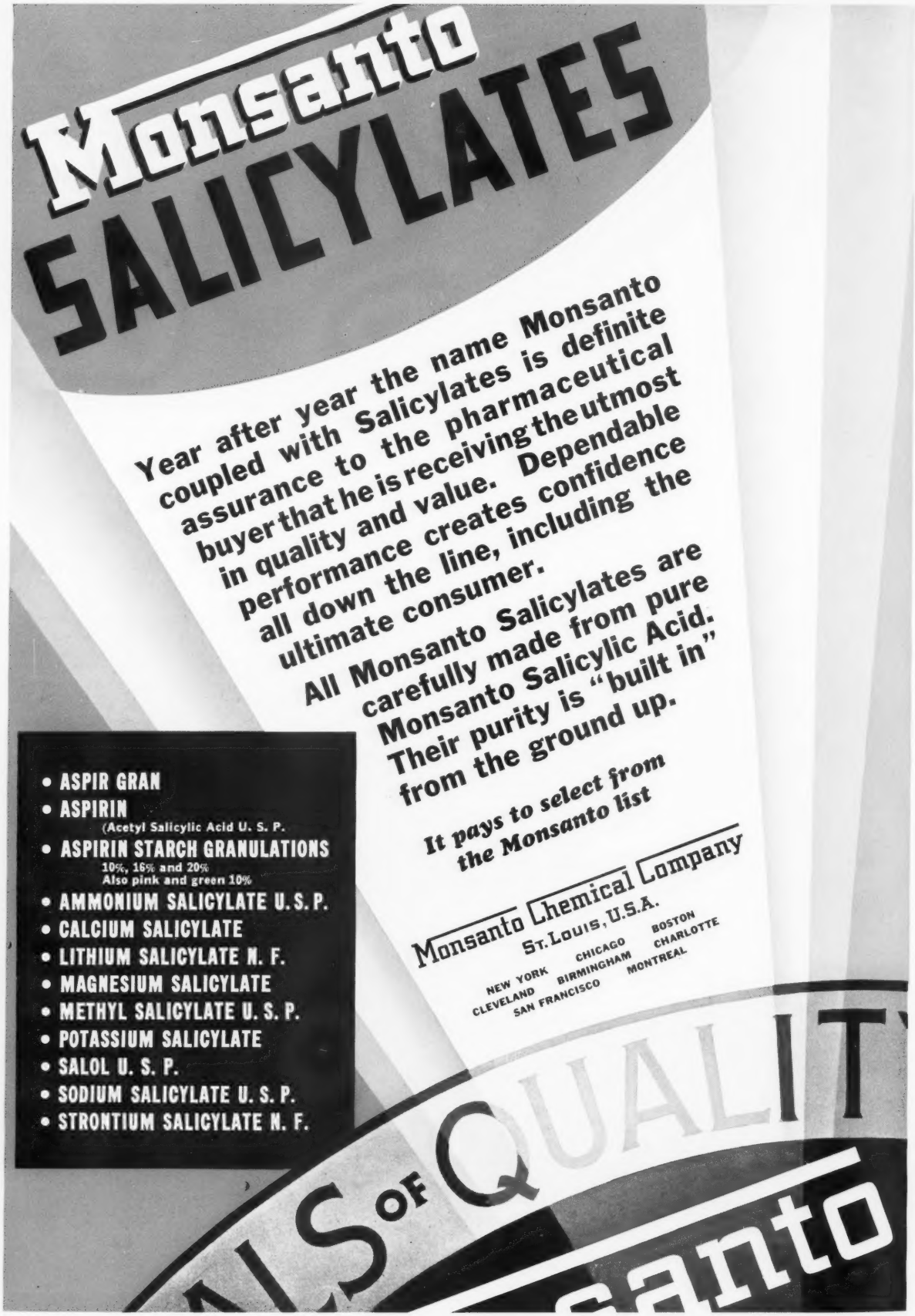
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SALICYLATES
Year after year the name Monsanto coupled with Salicylates is definite assurance to the pharmaceutical buyer that he is receiving the utmost in quality and value. Dependable performance creates confidence all down the line, including the ultimate consumer.
All Monsanto Salicylates are carefully made from pure Monsanto Salicylic Acid. Their purity is "built in" from the ground up.
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Monsanto

Molinard Establishes Here

Molinard, perfumer with headquarters at Paris and Grasse, has established a company in this country to be known as Molinard, Inc. The company has offices in the Maison Francaise, Rockefeller Center, New York, and Edmond Grunig, formerly with Pierre Amouroux, Inc., is vice-president and general sales manager.

Retardo Backed by Insurance

Federal Research Corp., New York, announces that Retardo, its weight reducing preparation has been insured against harmful effects to its users. A $25,000 insurance policy has been issued to the corporation to indemnify all users against any possible damages on the part of Retardo. The company claims that this is the first product so insured.

Schwabacher Reprints

S. Schwabacher & Co., Inc. has announced that photo-offset copies of its advertisements which have appeared in the pages of this magazine are available and will be mailed upon request to anyone interested in them.

Name Changed to Delv

Manufacturers' Laboratories has changed its name to Delv Limited.

Hudson Laboratories Formed

Roswell M. Udall has formed Hudson Laboratories, 107 Hudson St., Jersey City, N. J., for the manufacture of chemicals, perfumes, etc.

Standard Homeopathic Formed

Standard Homeopathic Co., 317½ West 8 St., Los Angeles, has been formed for manufacture of drugs. The company is under the direction of George H. Hyland.

A. M. A. Rejects

AMEND'S SOLUTION

Amend's solution, made by Amend Laboratories, Inc. and marketed by Thomas Leeming & Co. has been rejected by the Council of the American Medical Association because "it is an unwarranted mixture marketed under false and misleading claims and intended to replace the use of well-known official preparations in similar disorders."

A. M. A. Accepts

RINGER'S SOLUTION

Ringer's solution, an aqueous solution containing, in 1,000 cc., sodium chloride 0.25 Gm has been accepted by the American Medical Association. Ringer's Solution is used when chlorides and sodium, potassium and calcium have been diminished. It is indicated in all forms of dehydration but particularly in cases in which loss of gastro-intestinal secretions has resulted from vomiting, diarrheas or fistulas. It is also used in acidosis or alkalosis for improvement of circulation and stimulation of renal activity. Prepared by Hospital Liquids, Inc., Chicago.

MCNEIL'S EMULSION CASTOR OIL

The new McNeil's Emulsion Castor Oil, a creamy, stable, pleasantly flavored emulsion containing 50 per cent by volume of chemically pure castor oil, has been accepted by the American Medical Association. Since no separation occurs, there is no oily taste.

Opportunity in Far East

Walter B. Linn, educated in this country and employed in China by one of the large U. S. pharmaceutical houses, has just returned here after an extended survey of Far Eastern market. He is interested in discussing with some pharmaceutical and cosmetic manufacturers the development of the Far Eastern market, looking toward establishment of a branch and factory.

DuPont Exhibit

The du Pont Co. has placed an exhibit of diversified chemical products in the New York Museum of Science and Industry, New York. The new du Pont agent for flame-proofing textiles and paper will be demonstrated as will Freon, plating materials, neoprene, Duco and Dulux, fatty alcohol, the anti-rust and anti-freeze material, dyes, plastics, the new cellulose sponge, photographic film, Cellophane, Acele, du Pont acetate rayon, and Alum.

A fashion show in the large Rotunda of the Museum will show how the diversified chemical manufacturing industry has modified styles by giving to artists and designers new materials with which they can interpret new modes.

Financial

Monsanto Increases Stock

At the annual meeting of the Monsanto Chemical Co., St. Louis, stockholders voted to increase the capital stock from 1,250,000 shares to 2,000,000 shares, of which 275,000 no-par will be preferred and 1,725,000 common. As the terms of the proposed amendment fix $100 as the liquidating value of the preferred, the amount of preferred authorized approximates $27,500,000.

White Dental Doubles Earnings

White Dental Manufacturing Co. reports for the year 1936 a net income of $406,267, equal to $1.35 a share on 300,000 shares of capital stock, including treasury shares. This compares with $215,724, or 72 cents a share, in 1935.

Hazel-Atlas Earns More

Hazel-Atlas Glass Co. reports a net profit for 1936 of $2,848,081, equal to $6.55 each on 434,409 $25-par capital shares, excluding 65 treasury shares. Net profit in preceding year was $2,746,897, excluding security transactions, or $6.32 a share. The total net profit for 1935, including $546,477 profit on sales of securities, was $3,293,374, or $7.58 a share.

Heyden Earnings Up

Heyden Chemical Corp., reports for 1936 a net profit of $555,540, after $26,289 provision for surtax on undistributed income. This is equal after 7 per cent. preferred dividends to $3.56 a share on 149,997 shares of $10-par common stock, excluding treasury shares. In 1935 the corporation earned $504,831 or $3.22 per common share.

Plough Earns $358,651

Plough, Inc., Memphis, reports a net profit of $358,651 for the year 1936, equal to $1.19 a share on 300,000 shares of no-par capital stock.

Norwich Dividend

Norwich Pharmacal Co., will pay a dividend of 50 cents a share on common stock, March 15, to holders of record on March 5.

Mead Johnson Increases Net

Mead, Johnson & Co. report for 1936 a net profit of $1,575,732, equal to $8.83 a share on 165,000 no-par shares of common stock. This compares with a net profit of $1,298,408 or $7.15 a common share in 1935. The company paid an extra dividend of 75c a share April 1 to stockholders of record March 15.

Amer. Com. Alcohol Earnings Up

The American Commercial Alcohol Corp. reports gross sales of $35,463,632 for 1936, compared with $30,781,767 in 1935. The company reports a net profit of $1,187,232, equal to $4.55 each on 260,947 shares of common stock. This compares with a net profit for 1935 of $823,412 or $3.16 a share.

Lehn & Fink Earnings Up 50%

Lehn & Fink Products Corp., reports for the year 1936 a net profit of $685,086, equal to $1.71 a share and comparing with $412,870, or $1.03 a share earned in 1935.

Northam Warren Earnings

Northam Warren Corp., New York, has reported for the year 1936 a net profit of $778,548.59, equal to $3.36 a share on 200,000 shares of common stock.

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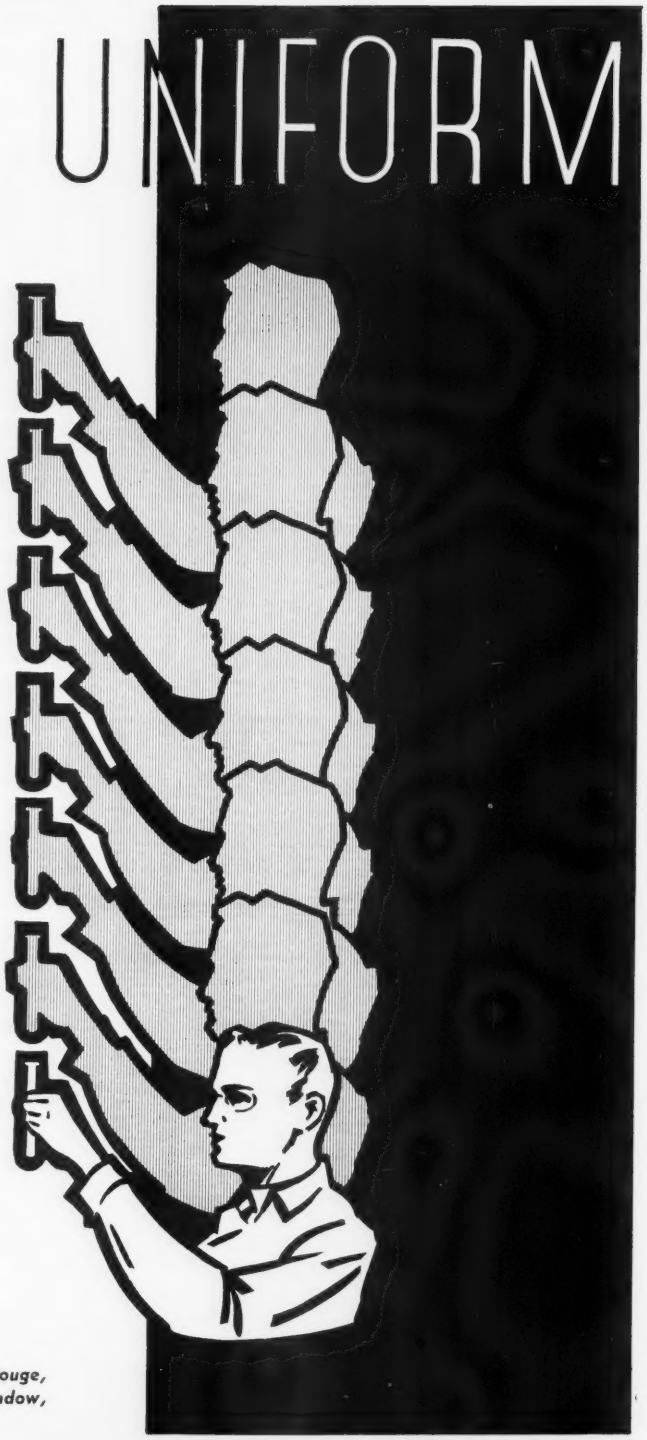
By Reason of Continuous Research

The uniformity of Kolmar products is the result of expert scientific research, constant inspection of raw materials and finished products.

A staff of seven trained chemists assure the maintenance of high standards in every item of the Kolmar line. Four of these chemists supervise production. One research chemist investigates new methods and materials. One organic chemist tests all raw material for any deviation of quality that may affect the uniformity of the product. This work is correlated under the supervision of one chief chemist.

But the leadership of Kolmar is based on more than uniformity. It rests on a high standard of excellence, an alert anticipation of new style trends and advance manufacturing methods that mean lowered production costs. The Kolmar Organization brings you dependable high quality products at a very reasonable price. Write for further information.



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Norman Kole
11-108 Merchandise Mart
Chicago, Ill.

M. C. Boyd
100-108 River Street
Hoboken, New Jersey

National Can to Merge

Stockholders of the National Can Co. have voted to merge the company with McKessport Tin Plate Co. A new company called the McKessport Tin Plate Corp. will be formed and will exchange its $10 par stock on the basis of two shares for each outstanding share of McKessport or National.

Stearns Increases Earnings

Frederick Stearns & Co., Detroit, reports for the year 1936 a net profit of $381,263, equal to $2.26 a share on 131,640 shares of no-par common stock and comparing with a net profit of $272,685, equal to $1.39 a share, in 1935.

Bourjois Earnings Multiply

Bourjois, Inc., and subsidiaries, New York, report for the year 1936 a net income of $445,125, after charges including provision of $8,194 for surtax on undistributed profits, equivalent after dividends on $2.75 no-par preference stock, to 82 cents a share. This compares with net earnings for 1935 of $133,355 which was equivalent to two cents per common share.

Merck Improves Earnings

Merck & Co. and subsidiaries report for the year 1936 a net income of $1,048,222, after $3,650 surtax on undistributed profits, equal to $2.57 each on 300,000 $1— par common shares, after dividend requirements on 6 per cent cumulative preferred stock. The net income in 1935 was $931,565, equal, after 8 per cent preferred dividends to $1.77 a common share.

McKesson Earnings Up 33%

McKesson & Robbins, Inc., reports for the year 1936 consolidated net earnings of $3,286,614, equal to $1.32 each on 1,282,-983 common shares. This compares with a net profit of $2,029,359, or 34 cents a share for 1935.

Allied Products Earnings Up

Allied Products Corp., has reported a net profit of $313,901 for the year 1936, equal to $2.68 each on 75,050 common shares. This compares with a net profit for 1935 of $238,714, or $1.68 per common share.

American Home Dividend

American Home Products Corp., Wilmington, Del., has announced a stock dividend of 20 cents a share payable April 1, 1937 to stockholders of record March 15.

Walgreen Sales Increase

Walgreen Co., Chicago, reports sales of $5,186,888 for February, 1937, an increase of 2.5 per cent. over the corresponding month last year.

Exhibit of Armstrong Cork Products Co. at the recent Packaging Show. The booth was built around displays of packages using Armstrong closures, with a revolving "theatre" in the center showing the entire line from Artmold caps to crowns.

Lambert Earns Less

The Lambert Co., has reported a net income for 1936 of $1,272,387, equal to $1.70 each on 746,371 capital shares and compared with $1,516,740, or $2.03 a share in 1935.

Sylvania Earns More

Sylvania Industrial Corp., New York, has reported net earnings for 1936 of $1,161,559, equal to $2.75 a share and comparing with an income of $974,504, or $2.31 a share, in 1935.

Murphy Joins Rosenthal

H. H. Rosenthal, president of the H. H. Rosenthal Co., distributors, importers, and exporters of chemical, drugs, oils, announces that Walter J. Murphy is now associated with the company.

Mr. Murphy, managing editor of "Chemical Industries" for the past seven years, and technical editor of the "Chemical Guide Book" since 1933, resigned April 5 to take up his new duties. Previously he was associated at various times with Mutual Chemical Co. of America, W. F. George Chemicals, Inc., Naugatuck Chemical Co., and American Cyanamid Co. He is a member of the Chemists' Club (N. Y.), Salesmen's Association of American Chemical Industry, American Chemical Society, and is a fellow of American Institute of Chemists.

Obituaries

Frank C. Hitchcock

Frank C. Hitchcock, a chemist with Merck & Co., Rahway, N. J., died at his home in that city March 14, after a heart attack. He was sixty years old.

John C. Muth

John Clement Muth, seventy-one, senior member of the firm of Muth Brothers & Co., Baltimore, died after an illness of about a year at his home in Catonsville on March 4. Mr. Muth was a son of John P. Muth, one of the founders of the firm and was a former president of the Baltimore Drug Exchange.

Harold A. Bates

Harold A. Bates, with the Colgate Co. for over thirty years and sales manager of the soap department before the firm became Colgate-Palmolive-Peet Co., died at the Wickersham Hospital in New York March 9 at the age of fifty-nine. Mr. Bates retired from active business in 1929.

James L. Hutchison

James Lafayette Hutchison, advertising manager of the United Drug Co., died recently at his home in Cambridge at the age of forty-seven. Mr. Hutchison, who represented the American Tobacco Co. in China from 1911 to 1917 and also in 1929 was known as a writer of short stories.

Calvin R. Webber

Calvin R. Webber, field sales supervisor of the Mennen Co., died recently. Before going to the Mennen Co., he was for many years with the Packer Mfg. Co. Inc.

Books - OF IMPORTANCE TO DRUG AND COSMETIC MANUFACTURERS

COSMETICS and PERFUMES

Modern Cosmetics—Chilson, 396 pp.	$ 6.00
Perfumes and Cosmetics—Askinson 392 pp.	6.00
Moderne Parfumerie—Mann (German), 516 pp.	12.00
Leitfaden Der Modernen Parfumerie—Burger (German) 208 pp.	3.50
Preparation of Perfumes and Cosmetics—Durvelle, 419 pp.	10.00
Perfumes, Cosmetics & Soaps—Poucher Vol. I 439 pp.	8.00
Vol. II 426 pp.	8.00
Vol. III. 228 pp.	7.00
Cyclopedia of Perfumery—Parry (2 vols.) 844 pp	10.00
Chemistry of Essential Oils and Artificial Perfumes—Parry, Vol. I 549 pp.	12.00
Vol. II 365 pp.	10.00
Cosmetic Dermatology—Goodman 591 pp.	6.50

FORMULARIES

Manufacturers' Practical Recipes—Jameson, 579 pp	$10.00
Henley's Twentieth Century Book of Formulas and Processes—1937 Ed. 883 pp	4.00
Chemical Formulary—Bennett, Vols. I, II, III each.	6.00
Pharmaceutical Formulas Vol. I—1146 pp.	8.00
Vol. II—983 pp.	8.00
Practical Flavoring Extract Maker—Kessler, 126 pp	4.00
The Medical Formulary & Prescription Manual—Dauer.	3.50
National Formulary VI—556 pp.	5.00
Prescription Writing and Formulary—Solomon.	4.15
Scientific American Cyclopedia of Formulas—Hopkins. 1077 pp.	5.50
Pharmaceutical Recipe Book—II 549 pp.	5.00
Flavouring Materials Natural and Synthetic—Clarke, 166 pp.	3.00
Flavours & Essences, a Handbook of Formulae—Gazan, 115 pp.	10.00

CHEMICAL

The Biochemistry of The Lipids—Bull, 127 pp.	$3.25
The Theory of Emulsions and Their Technical Treatment—Clayton, 458 pp.	8.00
Handbook of Chemistry and Physics 20th Ed.	6.00
Commercial Organic Analysis—Allen, 10 vols. each vol. sold sep. per vol.	7.50
Inorganic and Theoretical Chemistry—Taylor,832 pp	6.00
A Short Organic Chemistry—Taylor, 375 pp.	3.00
Technical Aspects of Emulsions—150 pp.	2.50
Chemical Dictionary—Hackh, 790 pp.	10.00
Vegetable Fats & Oils—Jamieson, 444 pp.	6.50

MERCHANDISING

Dollar Makers—Eager, 197 pp.	$ 2.00
Retail Selling and The New Order—Collins,203 pp	2.50
The Road to Good Advertising—Collins, 217 pp.	2.50
How to Run Better Sales Contests—Kaufman, 222 pp	3.50
What Makes People Buy—Laird, 237 pp.	2.50
Rex Cole on Salesmanship—Rex Cole, 253 pp.	2.50
Wholesale Accounting and Control—Heckert & Stone, 234 pp.	3.00
The Law of Drugs and Druggists—Arthur, 487 pp	3.00

BEAUTY CULTURE

Our Vanishing Hair—Nessler, 140 pp.	$ 2.00
The Successful Hairdresser—Wilson, 416 pp.	3.50
Modern Beauty Culture—Verni, 434 pp.	10.00
The Beauty Culture Handbook—Hanckel, 177 pp.	1.50
Modern Beauty Culture—Smith & Rockwood, 290 pp.	3.00

MEDICAL

The Kidney in Health and Disease—754 pp.	$10.00
Tuberculosis—Holmes, 312 pp.	2.00
Nervous and Mental Diseases—Maloy, 551 pp.	7.50
Diseases of Women—Crossen & Crossen, 8th Ed. 999 pp.	10.00
Internal Medicine—Musser, 1288 pp.	10.00
Forensic Medicine—Kerr, 311 pp.	3.60
Pocket Pronouncing Medical Dictionary—Gould. Thumb index.	2.00
A Treatise On Medical Jurisprudence—Oppenheimer, 290 pp.	2.50
Physiology in Modern Medicine—Macleod, 1154 pp.	4.00
Treatise on Permanent Wave Burns—Eberhart.	8.50
Recent Advances in Dermatology—Goldsmith, 522 pp.	2.00
Rational Pharmaceutical Treatment of Common Skin Diseases—Goodman, 345 pp.	5.00
Introduction to Dermatology—Sutton, 566 pp.	5.00
	5.00

PHARMACEUTICAL

Potter's Therapeutics, Materia Medica and Pharmacy—Scott, 997 pp.	$ 8.50
Modern Drug Encyclopedia and Therapeutic Guide—Gutman, 1393 pp.	7.50
United States Dispensatory—Wood-LaWall, 22nd Ed., 1862 pp.	15.00
Remington's Practice of Pharmacy—8th Edition, 2162 pp.	10.00
U. S. Pharmacopoeia XI—675 pp.	5.00
Essentials of Pharmacy—Snow 804 pp.	7.50
Handbook of Physiology—Halliburton & McDowall, 971 pp.	5.50
Pharmaceutical Chemistry—Krantz, 282 pp.	3.50
The Arithmetic of Pharmacy—Snow, 125 pp.	2.00
Textbook of Physiology—Zoethout, 694 pp.	4.75
Practical Pharmaceutical Chemistry—Cooper & Appleyard, 136 pp.	1.75
A Manual of Pharmacology—Sollman, 123 pp.	7.50
British Pharmacopoeia—1768 pp.	10.00
French Pharmacopoeia—999 pp.	10.00
German Pharmacopoeia—854 pp.	12.00
Swiss Pharmacopoeia—1244 pp.	15.00
Art of Compounding—Scovill 6th ed., 620 pp.	4.75
Extra Pharmacopoeia Vol. I—Martindale & Westcott 21 ed. 1182 pp.	6.50

MISCELLANEOUS

The Exporters' Encyclopedia, 1936—1780 pp, net with bulletin service.	$20.00
Psyllium Seed—Montague, 170 pp.	2.00
Pyrethrum Flowers—Gnadinger, 380 pp.	5.00
Trade-Marks for Perfumes, Toilet Preparations and Soaps	25.00
Grasse Et Sa Region	7.50
Modern Soap Making—Thomssen & Kemp.	7.50

NEW BRITISH BOOKS

Technical Aspects of Emulsions—Freundlich.	$4.00
Distillation—Reilly.	1.25
Inorganic and Theoretical Chemistry—Taylor.	6.00
The Chemists' Year Book—Atack.	6.00

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Please remit with order **For other titles, consult our Book Dept.**

INDUSTRY'S BOOKS

Any book reviewed in this section can be purchased direct from THE DRUG AND COSMETIC INDUSTRY at regular publisher's price.

The Aromatic Diazo-Compounds and Their Technical Applications, by K. H. Saunders, 224 pages, Longmans Green, New York, $4.25.

Since the publication of the second edition of Cain's "Chemistry and Technology of the Diazo-Compounds" in 1920, great advances in the chemistry and technical application of this group of compounds have occurred. Since diazo-compounds are of fundamental importance to the dyestuff industry, a new book has become highly necessary. The author has not attempted to describe in detail all the patents and literature that have appeared in relation to this subject, since the mass of material would be enormous; rather, he has written a concise statement of the present position of the chemical knowledge of diazo-compounds, omitting no important reference, yet giving a clear pricture of the subject.

Modern Treatment and Formulary, by Edward A. Mullen, M. D., F. A. Davis Co., Phila., 707 pp. Price $5.00.

The busy practitioner will find in this book information for use in his daily office and bedside practice. The aim has been to present only that which is practical in a handy, compact form for use in everyday practice.

The major portion of the book is devoted to the essentials of treatment combined with over two thousand selected prescriptions, many signed.

Elements of Retail Selling, by Paul H. Nystrom, The Ronald Press Co., New York, 369 pp. price $2.40.

Mr. Nystrom is well qualified to write on this subject through his personal experience in store keeping and his work in formulating the NRA general retail code. In his book studies are presented in the order in which most young people make their contacts when beginning work in retail stores. The employment system is explained and then the student is carried on into the principles of stock work, store housekeeping and finally into a practical and substantial treatment of retail selling and service.

Chemical Who's Who—Vol. II, 1937, Edited by Williams Haynes—The Haynes & George Co., New Haven, 543 pp. Price $1.00.

Edited by Williams Haynes, publisher of "Chemical Industries" this well-known volume now in its second edition contains some 5,686 biographies as compared to 3,982 in the first edition published in 1928. Many names from the medicinal and cosmetic industries have been dropped from the new edition but within the chemical field proper the listings have been widened to include technical and educational leaders. While the president of important perfumery firms has been omitted, the chemical chiefs of their technical and research staffs have been included. Each biographical sketch is brief but inclusive. The new edition of Chemical Who's Who should prove as valuable and interesting to every member of the chemical industry as its predecessor.

Diseases of the Coronary Arteries and Cardiac Pain, Edited by Robert L. Levy, M. D., The MacMillan Co., New York, 445 pp. illustrated, price $6.00.

During the past twenty years, great advances have been made in the study of affections of the coronary arteries and of cardiac pain. This volume contains the contributions of fourteen outstanding men in this field who have assumed critical attitudes in the light of their own experiences and judgment, have presented definite, digested points of view. The volume contains an understanding of the structure and behavior of the coronary circulation under normal and pathologic conditions which is necessary for all who are concerned with the problems of human biology, and will be indispensable to those who undertake the recognition and treatment of disorders of the heart due to diseases of the coronary arteries.

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If you contemplate some new item, or are having difficulties with any of your present creams, powders, perfumes, bath salts, or other toilet preparations, why not unburden your problem upon us? Through the facilities and personnel of our organization we offer you the surest means of producing a product perfumed for enduring perfection --a product worthy of your name, and one that will ***stand out*** in the best of company! Consult us by mail, through our representatives or by personal visit . . . . at your convenience.

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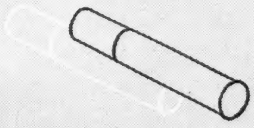

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FLAVORING OILS, ESSENCES and SPECIALTIES for PHARMACEUTICAL PREPARATIONS, DENTAL PASTES and POWDERS, MOUTH WASHES, PREPARED FOODS, DRINKS, ETC.

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Take advantage of our experience; let our Research and Service Departments assist you.

•

This Way To Beauty, Helena Rubinstein, 188 pp. Illus. Dodge Publishing Company, New York. Price $2.00.

Written by one of the world's foremost beauty specialists this book will undoubtedly attract considerable attention. It points the way to beauty through exercise, relaxation, diets, colors, make-up etc.

Distillation, by Joseph Reilly, 120 pages, Chemical Publishing Co., New York, $1.25.

In this monograph an attempt has been made to summarize recent developments in the theory and practise of various aspects of distillation. The author is a recognized authority on the production of absolute alcohol by the azeotropic process and the work presents a good picture of the subject in the scope of this short monograph.

Aromatherapie, by R. M. Gattefosse, 187 pages, Girardot & Co., Paris.

Based upon his own experience and on extensive bibliography which forms a valuable addition to the book, M. Gattefosse considers the physiological effects of many aromatic materials as well as theories for this action. It appears from this work that essential oils possess many valuable properties not shown by any other group of substances.

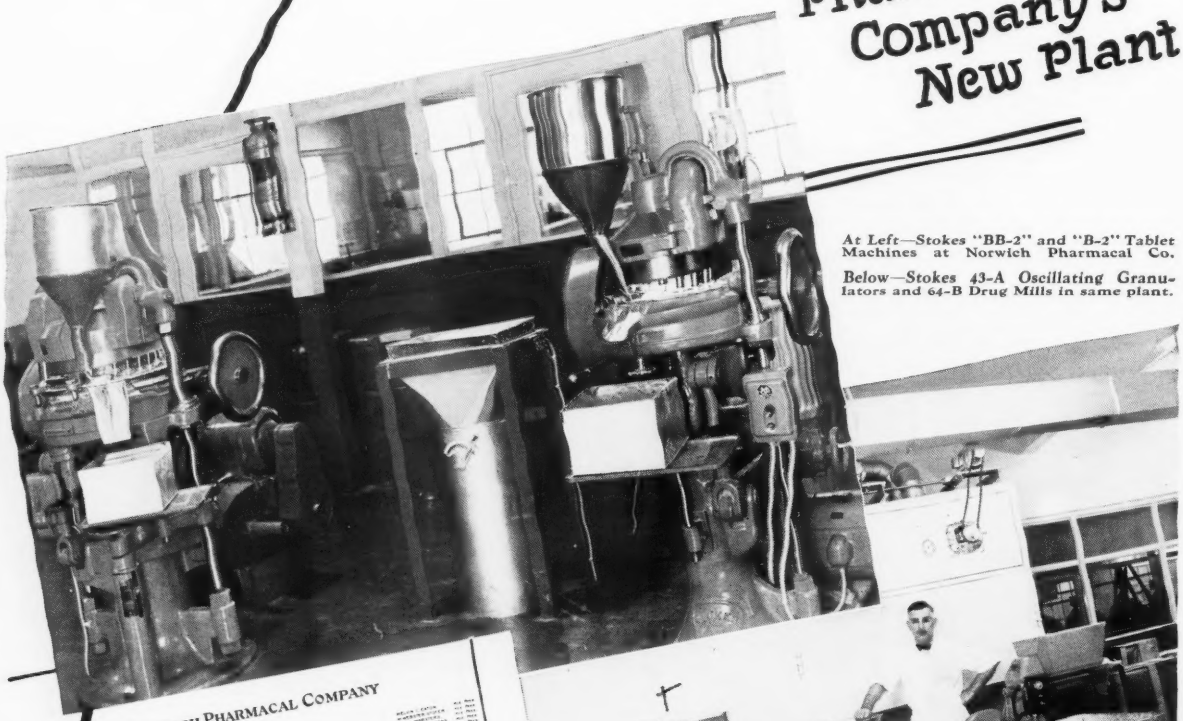
Oral Hygiene and The Treatment of Parodontal Diseases, by Russell W. Bunting, D.D.Sc., Lea & Febiger, Phila., 187 pp. illustrated, Price $2.50.

The purpose of this book, written by a distinguished dental pathologist, is to present certain principles of oral hygiene and the methods of practice which have been found to be highly effective in the prevention and control of both dental and oral diseases. After stating the basic principles involved, it describes a simple method of oral prophylaxis which the author has successfully employed over a long period of years. In this work Dr. Bunting shows the importance of greater emphasis on the sanitation of the mouth and a better control of dental diseases by hygienic measures.

The Extra Pharmacopoeia—Martindale, Vol. 1 21st Ed., 1182 pp. The Pharmaceutical Press, London.

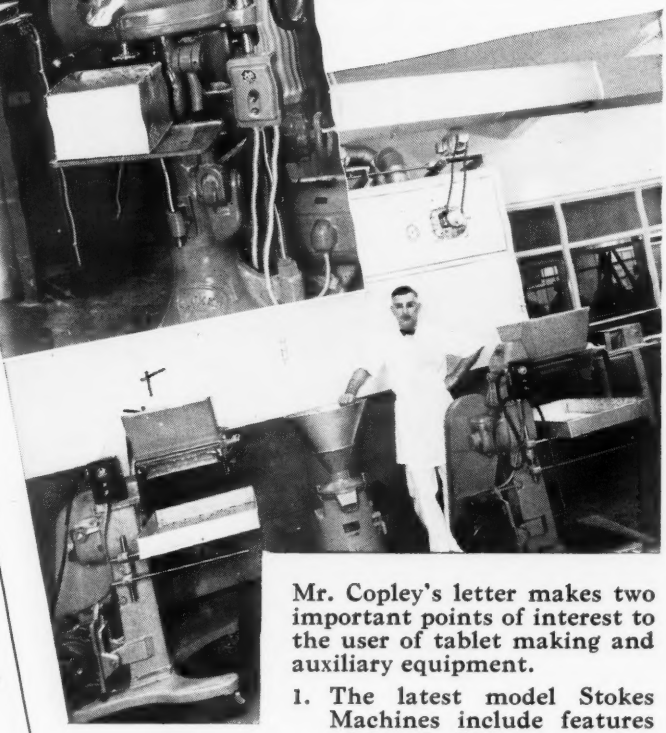
The Extra Pharmacopoeia is complimentary to The British Pharmaceutical Codex but is widely different in its scope in that it contains considerable information on rarely-used therapeutic substances. As in former editions, references to medical, chemical and pharmaceutical literature are appended to each description of a substance, and they follow the section of the monograph describing the therapeutic uses to which the article is normally put. For instance in the description of insulin, filling fourteen pages, at least half consists of references to medical literature, and it is classified in such a manner that any particular aspect of its use can readily be examined. Possibly thousands of proprietary medicines are mentioned in this new edition.

Read why they ordered STOKES Equipment for NORWICH Pharmacal Company's New Plant



At Left—Stokes "BB-2" and "B-2" Tablet Machines at Norwich Pharmacal Co.

Below—Stokes 43-A Oscillating Granulators and 64-B Drug Mills in same plant.



THE NORWICH PHARMACAL COMPANY
LABORATORIES
NORWICH, NEW YORK

NORWICH N.Y
November 30, 1936.

F. J. Stokes Machine Company,
Olney Post Office,
Philadelphia, Pa.

Attention: Mr. J. A. Silver, Vice-President.

Gentlemen:

Our new Stokes tablet compressing machines, granulators and mills are now in operation in our new tablet department and proving very satisfactory in every way. We find that the variable speed drive on the rotary compressors enables us to obtain maximum production under all conditions and due to the great variety of granulations and tablet sizes, this feature has resulted in a substantial production increase per machine.

You will be interested to note that in setting up our new Tablet Department four of your Model B roteries purchased prior to 1920 and which have been in daily operation since that time were found to be in such satisfactory mechanical condition that individual drives were installed on these compressors for use in our new department. We feel that this speaks well for the quality of your equipment.

We will be glad at any time to show our Stokes equipment to any of your prospective customers who may be interested in seeing these machines in operation.

Very truly yours,
THE NORWICH PHARMACAL COMPANY
L. B. Copley
Plant Engineer.

L. B. Copley
ICF

NEW FEATURES
of
Stokes Tablet Machines

- Semi-steel frames
- Anti-capping device
- Calibrated Excess Pressure Release
- Twin-disc clutch
- Housed working parts
- Stainless steel hopper
- Improved Motor Drive, variable speed, if desired

Mr. Copley's letter makes two important points of interest to the user of tablet making and auxiliary equipment.

1. **The latest model Stokes Machines include features which facilitate operation and increase production.**
2. **Stokes machines in use for many years "stand-up" under severe service—and of course this applies to the new machines as well.**

Send for literature and quotations on your equipment requirements.
Laboratory Advisory Service Available.

FJS F. J. STOKES MACHINE COMPANY
PHARMACEUTICAL EQUIPMENT
ESTABLISHED 1895

5932 Tabor Road — Olney P. O. — Philadelphia, Pa.

PRODUCTION FORUM

BY Francis Chilson
PRODUCTION ENGINEER

PRODUCTION MEN MEET

In conjunction with the recent Packaging Show, a meeting of the Production Manager's Association was held at the Hotel Pennsylvania. It was pretty much an organization meeting. But two important decisions were made: all machinery manufacturers were given the leg and will not be admitted either to active or associate membership. The decision was very sound for if the organization is to get anywhere it must be free from any outside influences which would tend to restrict a full and free discussion of equipment. The second decision was to limit the activities of the organization to packaging equipment problems and to change the name of the organization accordingly to signify its more restricted scope. No processes and no processing equipment will be discussed. The latter decision did not appeal to us particularly, because we have always felt that processing and production problems and equipment are more interesting than packaging problems and equipment. But the boys felt that since there are chemical engineering societies for the discussion of processing problems, production and processing should be omitted. Another interesting development was the formation of informal regional groups, one of which has already been started in Chicago. This is a very good idea because it will sustain interest in the purposes of the organization.

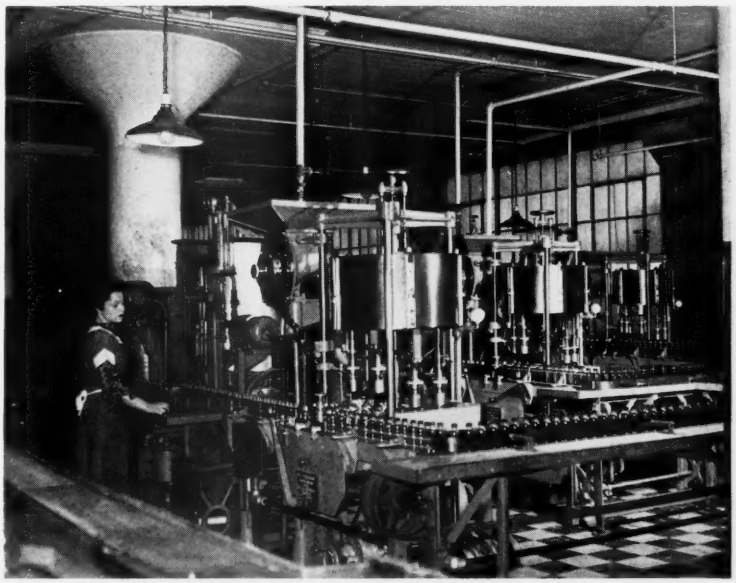
NEW LIGHTNINS

Portable Mixers, equipped with totally enclosed air-jacketed motors and explosion-proof air-jacketed motors are an exclusive patented development of the Mixing Equipment Company, Rochester, N. Y., of utmost importance to the process industries. The developments are covered by United States Patents Nos. 2042511 and 1817353.

"Lightnin" portable safety mixers, equipped with totally enclosed air-jacketed motors, can be used over steaming kettles, jacketed tanks, and other receptacles which throw off steam and acid fumes. Emanations from the mix are blown away from the motor and rendered harmless to the motor windings.

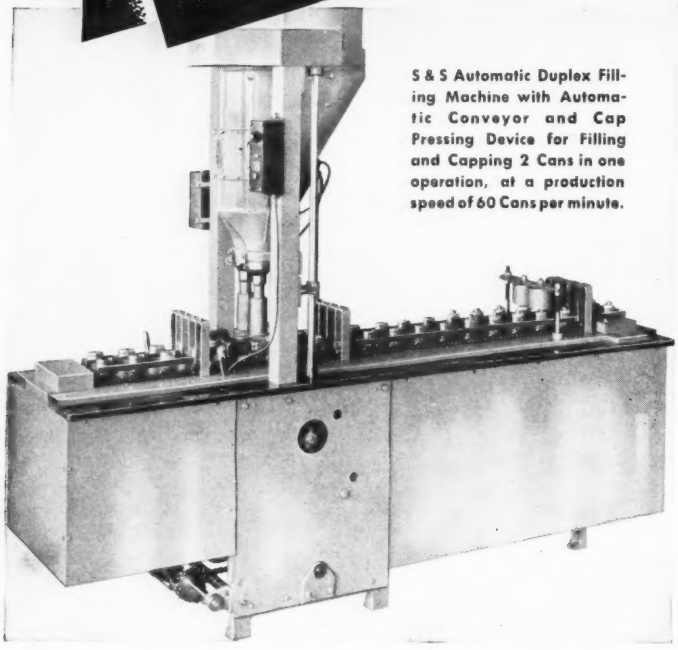
Air is drawn into the top of the motor by a fan, and circulated through the entire motor housing by a jacket. A steady stream of cool air is thus afforded, maintaining the proper motor temperature. Dirt, grit, and dust are kept entirely out of the windings and bearings.

"Lightnin" portable explosion-resistant mixers, equipped with explosion-resistant motors carry the underwriters label approved for Class 1, Group D applications permitting their use on explosive batches in hazardous locations. These mixers have the same patented features as the other totally enclosed air-jacketed models, and carry in addition the Approved Label of the Underwriters Laboratories.



The change in the closure of the Listerine packages from cork to plastic caps called for new equipment to cap the bottles automatically. Above are shown three capping machines supplied by U. S. Bottlers Machinery Corp. to the New Jersey plant of Lambert Pharmacal Co.

Another Leading Company Chooses... S&S FILLING EQUIPMENT



S & S Automatic Duplex Filling Machine with Automatic Conveyor and Cap Pressing Device for Filling and Capping 2 Cans in one operation, at a production speed of 60 Cans per minute.

FILLING MACHINES for powders, granular products, pastes . . . CARTON Filling and sealing machines . . . ENVELOPE Filling and sealing machines . . . TIGHT-WRAPPING Machines.

★

When E. R. Squibb & Sons, Manufacturing Chemists to the Medical Profession since 1858, decided to package Squibb Tooth Powder they chose the Stokes & Smith Automatic Duplex Filling Machine.

This machine fills two cans of the same size, or cans of two different sizes, at the same time. It also presses the caps in place and the complete operation is performed at a production speed of sixty packages per minute. That such a distinguished firm as E. R. Squibb & Sons should choose S & S Filling Equipment is considered high tribute. Perhaps it may bear witness to the fact that there is an S & S Filling Machine suited to your requirements, whether your product be a granular, powder or paste.

SPEEDS TO SUIT YOUR NEEDS—15-30-60-120 PER MINUTE—WRITE FOR ILLUSTRATED FOLDER

STOKES & SMITH Co

PACKAGING MACHINERY — PAPER BOX MACHINERY

4912 Summerdale Ave., Philadelphia, U. S. A.

VACUUM DRYER

Recent improvements make the Stokes Laboratory Vacuum Dryer No. 51 an even more suitable piece of apparatus for industrial and research laboratories, technical schools and universities than as previously made. It is used for vacuum drying or evaporating chemicals, pharmaceutical, food and similar products sensitive to heat or oxidation; also for drying hygrosocopic materials not readily dried in an atmospheric type oven.

The design is very compact with the condenser and receiver making up the stand for the vacuum chamber itself. The vacuum chamber is of special cast iron and contains two 18" x 14" shelves with 4" clearance between them. The vertical surface condenser is of the efficient countercurrent type with necessary inlet and overflow for cooling water. After condensing, the moisture or solvent removed is collected in a receiver beneath the condenser forming the base of the stand. Each dryer is self-contained as illustrated and is supplied complete with vacuum gauge, vacuum-break valve and either thermometer or steam pressure gauge. The finish is of gray enamel with hand wheels, sight glass covers and fittings nickel plated to present a neat appearance suitable for laboratory installation.

With the No. 51 Laboratory Shelf Dryer the same results are obtainable as with large plant size dryers. The laboratory size has every feature of the larger industrial units. This apparatus is also designed so that hot water can be used as the heating medium instead of steam. The necessary auxiliaries for hot water heating can be supplied. Drying trays of proper size made of vitreous enamel, stainless steel, monel metal, galvanized iron and pyrex glass can be furnished also.

The Dryer can be supplied with either the Stokes 146-C High Vacuum Pump as shown or, for the general work and vacuums up to 29 inches, with a reciprocating type of vacuum pump.

MIXERS

The Patterson Foundry and Machine Company of East Liverpool, Ohio, has recently redesigned their entire line of Typhoon Portable Power Mixers, making many improvements and still further increasing their portability.

Reduction in weight has been attained by the use of aluminum in construction The frame of the motor, end bells and lower housing are all made of polished aluminum. Weight savings result in as much as ten pounds in the ¼ H. P. size alone. Polished aluminum and chromium plate finish is employed throughout. No paint is used on these new models.

The geared Typhoons now have an aluminum frame motor built in a chromium plated case containing a highly developed bronze ball bearing gear reducer which is chatter-free and silent under all loads.

All Patterson Typhoons are fitted with fan-cooled, down-draft, self-ventilating motors as standard equipment, and with starting switches built inside of motor frames. The propellors insure complete mixing in the vertical plane and the adjustable shaft is equipped with a heavy duty guide bearing to eliminate whip.

PRIVATE LIVES

In knocking around the trade we learn many curious and interesting things about well-known men in the industry. For example, I am sure not many people know that J. R. DeSaxe, vice president of Grove Laboratories, was once a lieutenant in the Navy. He told me so himself. And I have come into possession of information which leads me to believe that he was no ordinary lieutenant either. If Fate had had a kinder face his name would have ranked in naval annals along with John Paul Jones, Stephen Decatur and others. Decatur's famous phrase "My country right or wrong" will be long remembered, but not half as long as DeSaxe's "Fire and fall back!", which has since become the basis of modern naval strategy. But the laurels of J. R. rest upon no mere flimsy phrase, but upon a plan, now called in the Naval College, "The DeSaxe Plan For the Subjection of The Upper Mississippi."

It was this plan, conceived the day after war was declared on Germany, which if it had received proper support, would have saved hundreds of thousands of lives, billions of dollars and it would have terminated the war in short order. As soon as the idea hit him, De laid it before Admiral Sims. "For Christ's sake," said De "What the hell's the good of going three thousand miles to fight Germans when there's plenty of them up around Milwaukee? They're thick up there. You can't walk without stepping on them."

What could have been more practical than that? According to the records the simplicity and economy of the idea did not at once register with the admirals, most of whom had already made requisitions for mistresses in Europe. But at length Lieutenant DeSaxe was appointed to head up a flotilla of dreadnaughts and he set out on his historic cruise. There are a few mean, jealous souls who have whispered that DeSaxe was not given dreadnaughts but Irish battleships (brick scows). But so long as there are great men and great events there will be belittlers too. I am giving the facts just as I got them out of the Congressional Record. I also have the log of the voyage written in the commanding officer's own hand.

The log is entirely too brief. At almost every hamlet along the Mississippi there is the cryptic entry, "Hove to, to fuel up." But the log does not state whether the ships or the commander needed fueling up. I am inclined to believe that it was the ships, although I must concede the likelihood that the commander touched off one or two, just to stave off malarial chills. At any rate the evidence shows that the dreadnaughts did not make very rapid progress up the river. They struck snags and bars frequently. Some detractors intimate that the commander in moments of forgetfulness used to mistake the wheel of his flagship for a roulette wheel, but there is no proof of this. The facts show that De had jealous enemies in the navy, for when he equipped his expedition in New Orleans, the fellow in charge of the supply department issued to him a couple of worn

Shown in the exhibit of F. J. Stokes Machine Co. at the Packaging Show are Dr. R. E. Horsey, R. C. Younheere, and Edward M. Franklin, representatives of R. H. Macy & Co., listening to Charles Boss (Center) explain the advantages of Stokes' tube and powder filling equipment.

When People Buy Drugs or Cosmetics

Some of the many well-known products that are wrapped on our machines.

WHEN health or beauty is at stake, the reliability of a product is of first importance . . . And it depends upon the package, its appearance and construction, to give assurance of this quality.

For example, people appreciate a package that protects the product from deterioration, tampering, or substitution. And they are favorably impressed by a smart, modern appearance.

We have had long experience in helping manufacturers to produce attractive packages that spell "Quality." We find that in the drug and cosmetic field particularly, a sharp eye must be kept on changing trends. Competition is keen, and when packaging methods are obsolete, or become slack, sales and profits suffer.

Have you a packaging problem? Outside help often clarifies it. Our recommendations are the result of sales and production experience in many industries—distinctive packaging at lowest cost is the result. Write for complete information on our large line of wrapping machines.

PACKAGE MACHINERY COMPANY, Springfield, Mass.
NEW YORK CHICAGO CLEVELAND LOS ANGELES
MEXICO, D. F., Apartado 2303 Peterborough, England: Baker Perkins, Ltd.
Melbourne, Australia: Baker Perkins, Pty., Ltd.

PACKAGE MACHINERY COMPANY
Over a Quarter Billion Packages per day are wrapped on our Machines

out gunboats. One of them had been sunk in the Civil War and since dredged up. It was the Merrimac I think. So with equipment like this a fellow is not to be blamed if he struck a few bars here and there.

The end of the expedition is sad. It was on a starry night at Natchez or maybe it was South Bend. The decks were cleared for action and everything aboard ship was tight as they say in the navy, when the sta'board watch shouted to the commander, "Look there, sir! There's a big animal across our bows! It looks like an elephant!" The commander raised his glass and looked long and earnestly at the animal which was contesting the right of way. "What the hell!" he said, "That's no elephant. That's a moose. Well, give him a shot anyway—and give me one while you're at it." And then suddenly he uttered his immortal command, "Fire and fall back!"

The record ends here. Some say the moose got mad and scuttled the flagship. Other's say it wasn't a moose at all but a Mississippi catfish. However, we've given you all the facts and you know we wouldn't lie to you.

TUBE MILL

The Patterson Foundry & Machine Company of East Liverpool, Ohio, has developed a line of Jacketed Continuous Feed and Discharge Tube Mills for grinding and Processing work of all kinds.

By the use of this Mill the Products can be heated during the grinding operation by circulating steam or hot oil through the jacket of the mill, or can be cooled by the circulation of cold water or brine. Thus, materials which must be heated in order to induce liquefaction or to form vapor from the moisture content of the product, may be handled, while other products with low softening point may now be ground successfully by reducing the temperature within the mill below the softening point of the product.

RE-CIRCULATING FAN

This pedestal type cooling fan, called the Roto-Beam, is said to reproduce the natural movement of air caused by rotation of the earth. As its name implies, Roto-Beam produces an actual moving beam of air, whirling helically, and causing a suction which draws the air from the lower, upper and all intervening sections of the Roto-Beam blade. This beam of air causes circulation of all the air in the room, at all levels. The outstanding features of this fan are:

Vacuum Resistance. Roto-Beam blades meet together in the hub which is so shaped that when the blade revolves it projects forward a spiral stream of air which completely destroys vacuum resistance in front of the Roto-Beam blade.

Form Resistance. Pressure and suction faces of the Roto-Beam blades are shaped in such manner that the air is drawn forward at a low velocity into the path of the front or pressure faces and form resistance is eliminated.

Friction Resistance. The front or pressure faces of the Roto-Beam blades are twisted, flat surfaces, decreasing uniformly in pitch from the inner to the outer ends, and by this formation friction resistance is eliminated by reason of the air constantly moving over a smooth graduated surface.

Induced Resistance. Leading and trailing edges of the Roto-Beam blades are formed in such manner that the suction produced by the trailing edge of each blade during rotation is imparted to the leading edge of the following blade which eliminates induced resistance.

End Thrust. The Roto-Beam blade floats because the helical moving stream of air discharged in front of the blade at a high rate of speed, forms a gyroscopic action, which eliminates the up and down thrust in Roto-Beam blades, drawing the air from in back of the blade by vacuum which is produced by the helical moving air stream discharged from in front of the blade. It is this vacuum action which eliminates back thrust to a minimum, thereby according a long life to the bearings and motors.

Roto-Beam fans or "air control units" are available in A. C. and D. C. 3 speed models in 18, 20 and 24 inch sizes: A. C. single speed models also available. "Junior" models 8, 10, and 12 inch A. C. and D. C. in 3 speeds and a 12 inch De Luxe model. Prices from $50.00 to $145.00.

SEND FOR A COPY

R. G. HASKINS COMPANY, 4536 West Fulton St., Chicago, invites you to send for a copy of a new bulletin describing the handy Haskins Portable Capper. This inexpensive capper is of the flexible shaft type and it can be used for tightening every kind and shape of cap from large cream jar caps to tiny, conical perfume bottle caps. It was this company which introduced the flexible shaft hand capper to the trade. The machine is inexpensive.

C. J. TAGLIABUE MFG. CO., Park and Nostrand Aves., Bklyn., N. Y. wants you to have a copy of their catalogue No. 900C which gives the dope on all sorts of instruments for controlling time, pressure and temperature. This company also has issued a new catalogue on thermometers and hydrometers.

The C. J. Tagliabue Mfg. Co. of Park & Nostrand Aves., Brooklyn, N. Y. announce the publication of a new TAG Laboratory Thermometer and Hydrometer catalog, No. 1100A.

F. J. STOKES MACHINE CO., Olney P. O. Phila. have issued an interesting new bulletin describing the commercial advantages of the Fat-Filled tube which the Westite closure makes possible. You should have this.

WILKENS-ANDERSON COMPANY, 11 N. Canal St., Chicago., will be glad to send you a copy of two new bulletins: Measuring pH with the Glass Electrode and Coleman pH Electrometers.

THE ALUMINUM CO. of America, Pittsburgh, Pa., will put you on the list for a darn interesting booklet. Aluminum News-Letter if you're not already gettin it.

THE INTERNATIONAL NICKEL CO., 67 Wall St., New York will send you a similar news bulletin if you will drop them a line.

Abbe Engineering Co., 56 Church Street, New York, would like you to have in your files, where it will be handy the next time you are in need of a mill of any kind, a sifter or a mixer, their new bulletin describing their line of this type of equipment.

Booth of the New Jersey Machine Corp. at the Packaging Show.

Down go Pulverizing Costs UP GO PROFITS!

Does your present pulverizer use too much power . . . require additional classifying equipment . . . use fans and cyclones? Is it dusty?

Does it run up grinding costs so that profits are low and unsatisfactory?

Then you should surely investigate the

Low Pulverizing Costs

of the Mikro-Pulverizer. Power savings are often as much as 75%. Extra screening or classifying entirely eliminated. No fans—no dust. More accurate control of particle size.

Manufacturers the world over are replacing with the Mikro-Pulverizer which usually pays for itself entirely out of savings.

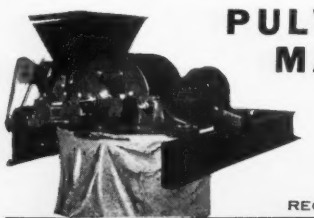
Write for catalog today.

Free Grind Test

This company maintains a complete research laboratory for study of particle size control and for making test grinds on a wide range of materials sent us from almost every type of industry in almost every part of the world. Strictest confidence is maintained.

Grind tests are also made for prospective users of Mikro-Pulverizers without obligation and results reported. Write for confidential instruction sheet for test grindings. A Mikro-Test may point the way to greater profits.

● Ideal for pulverizing, intensive mixing, dispersing or blending of face powders, rouges, tooth powders, drugs, chemicals, soaps, etc., etc. ● DUSTLESS! NO FANS, CYCLONES OR SEPARATORS



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The MIKRO PULVERIZER

UNUSUAL OPPORTUNITY

Take advantage of our large stock of unusual equipment obtained from recent purchases. Prices have been slashed for quick disposal. This is only a partial list. Your inquiries solicited.

1—Colton No. 14 automatic Tube Filling and Closing Machine.
1—Stokes No. 90C automatic Tube Filling and Closing Machine.
1—Stokes No. 2C piston type Tube Filler, motor driven.
1—Stokes No. 2B pressure type Tube Filler, motor driven.
1—U. S. Bottlers Combination No. 4 Unit, consisting of Filter with Pump and motor and six spout Siphon Bottle Filler.
1—Karl Kiefer Diacell Filter, complete with packer.
3—Paul O. Abbe No. 3 Eureka Jar Mills.
1—Day 12" Ointment Mill, motor driven.
3—Pfaudler 150 gallon, tilting type, glass-lined Rouge and Powder Mixers, with double motion agitators.
12—Pfaudler and Glascote 20 to 75 gallon, glass-lined Tanks.
1—World Improved model S Labeling Machine.
4—Day 50, 200, and 2000 lbs. Dry Powder Mixers and Sifters, motor driven.
3—Day and Robinson 100 and 600 lbs. Dry Powder Mixers and Sifters.
1—Stokes & Smith model G 1 Powder Filler.
1—Day 40 gallon Pony Mixer, motor driven.
1—Day Laboratory Roller Mill, motor driven.
1—Day four speed Gem Cream Mixer, motor driven.
1—Karl Kiefer 100 gallon, re-circulating Percolator with pump and motor.
1—Rotex Sifter, 20 x 48", motor driven.
3—Colton No. 2B Tablet Machines, up to ½" diameter.
1—Stokes H Tablet Machine, up to 2" diameter.
4—Seitz-Werke and U. S. Filters.
2—Kiefer and Goldman 72 and 80 spout Bottle Washers.

Also a complete stock of Kettles, Mixers, Filters, Pumps, etc., etc.

"We buy from single items to complete plants."

STEIN-BRILL CORP.

Agent for George G. Rodgers Co.
Manufacturers of Tube Filling and Closing Machines

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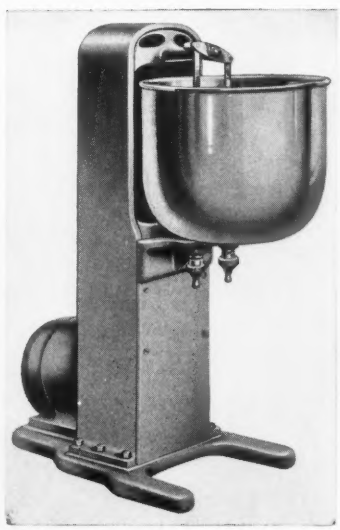
THE ELECTRIC HOMOGENIZER FOR SMALL-SCALE MANUFACTURE

Designed to meet a very definite need in smaller plant production, experimental work, and as auxiliary equipment to large scale production units. It is particularly suited to limited production and for laboratory purposes where extremely high pressures are not required.



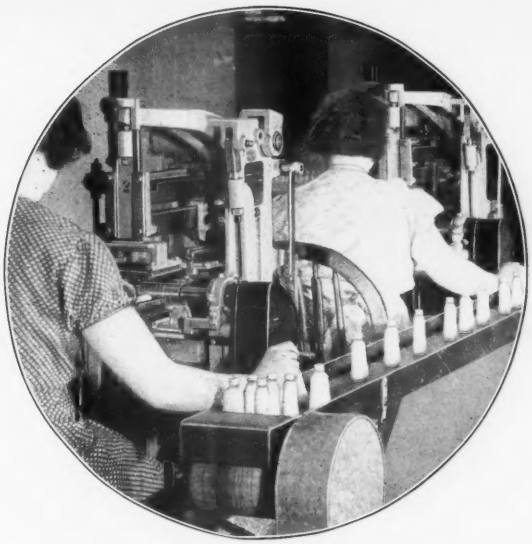
Recommended for making all kinds of liquid emulsions and suspensions, and for ointments, creams, lotions, etc.

This homogenizer has an operating capacity of from 12 to 15 gallons per hour. It is sturdily constructed, with long hour heavy duty motor, and meets all requirements of continuous service.

Complete literature, including the booklet "Cosmetic Emulsions and Their Stable Preparation," upon request.

A convenient system of deferred payments available if desired.

INTERNATIONAL EMULSIFIERS, Inc.
666 LAKE SHORE DRIVE, CHICAGO, ILLINOIS



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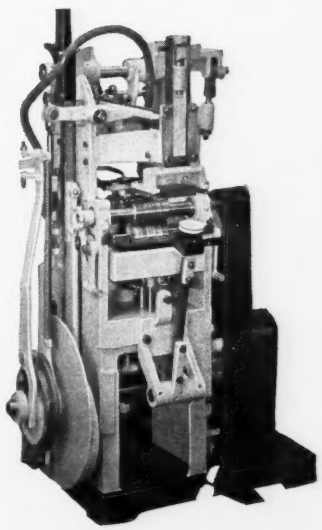
- NO WIPING OF BOTTLES
- "PETTY CASH" CHANGE-PARTS
- OVER-ALL GLUING ON LABELS

Handles labels or seals, paper or foil, plain or embossed on arcs, flat or recessed surfaces — 7/8 x 7/8 inches up — fool proof and fast!

Your most finicky products, labeled in the exact position you demand—every one of them—at a speed of 60 a minute,—up . . . . Any shape label—on large or small bottles, jars, flasks or boxes. Enjoy the lowered cost of labeling fine, as well as mass products, with the machine you will eventually install:—the



PONY LABELRITE

Critical production men installing one Pony, have promptly standardized on an entire installation of the Pony Labelrite, because of low operating costs, truly "petty-cash" change parts—and the ease with which their products are meticulously labeled.

Write for detailed catalog, and enclose illustration of your container. . . . . .

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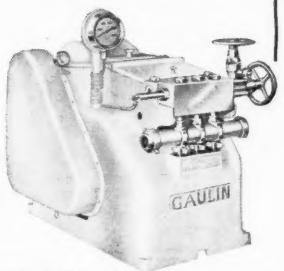

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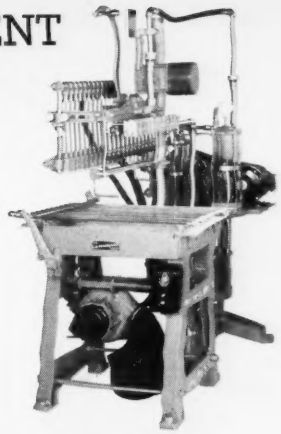

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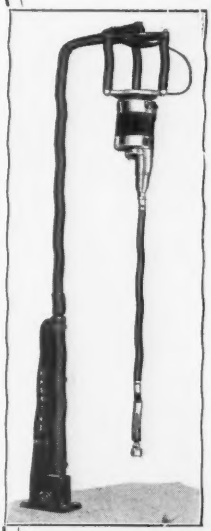

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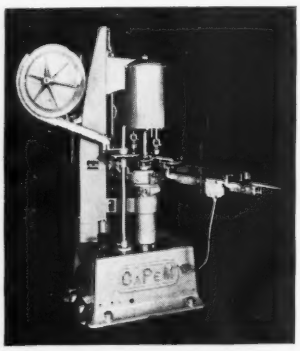

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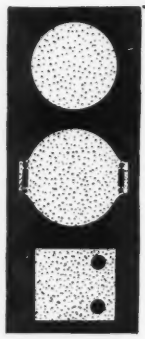

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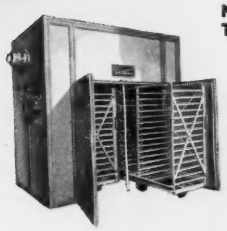

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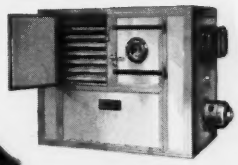

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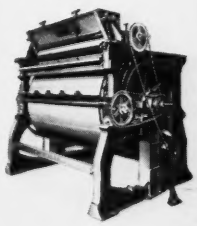

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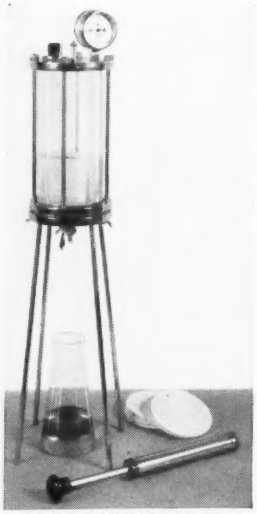

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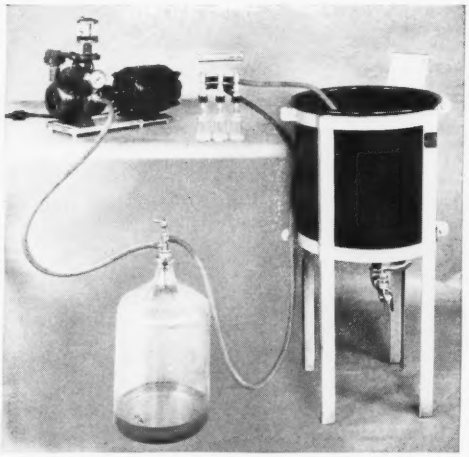

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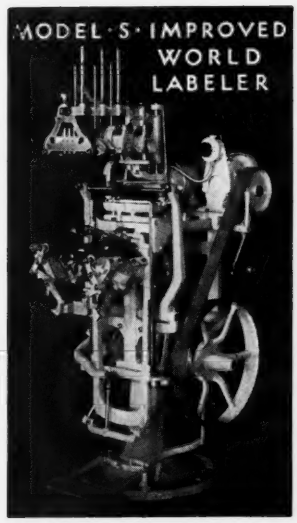

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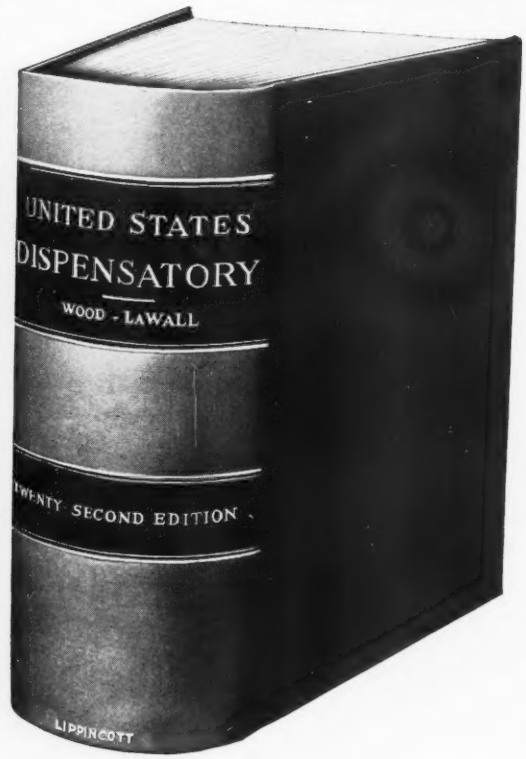

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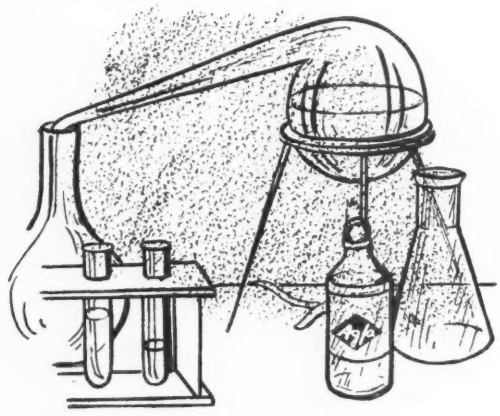

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ROSE COMPOSITIONS

Rose scents have lost considerable popularity as a perfume in recent years but they are still used to a large extent in creams, lipsticks, and hair tonics. However, the chief importance of rose is its use in blending various bouquets and flower scents. Several good artificial rose compounds are essential to every perfumer. For example, it is extremely important in the development of certain types of lily, oriental and sandal bouquets. In fact it may be safely said that there are very few popular perfumes on the market which do not contain the artificial or natural product.

Rose formulas have varied considerably during recent years due mainly to the development of new aromatics. The formulas of twenty years ago were based mainly on the absolute and attar of rose with additions of geranium, patchouli, vertivert, and nutmeg. The modern formula of today is based on such products as rhodonol, phenyl ethyl alcohol, phenyl acetaldehyde, phenyl acetaldehyde dimethyl acetal, geraniol, and citronellol, using musk ketone as a fixative, and varying the amount of patchouli and geranium to suit the type desired.

The red rose type appears to be the most popular odor for creams and cosmetics, and can be developed along the following lines:

Geraniol	6 oz.
Citronellol	2 oz.
Phenyl acetaldehyde (50%)	12 oz.
Rhodonol (from geranium Bourbon)	4 oz.
Oil Patchouli	5 oz.
Linalool	7 oz.
Phenyl acetaldehyde dimethyl acetal	2 oz.
Musk Ambrette	1 oz.
Geranium African	60 oz.
Geranium Turkish	4 oz.
Phenyl ethyl alcohol	8 oz.
Cumanyl Alcohol	8 oz.

For blending purposes, not only the red rose type is desirable, but also the lighter resembling the white rose. In most cases it is necessary to try both to determine which is the best adaptable to the composition. This can be done by test samples, for example, by using a proportion of from 6 to 8 oz. to the 100 pounds of cream, and then checking for discoloration and odor value. In perfumes the various types can be inserted in the formula to determine the one which will yield the best results. Suitable fixatives should not be overlooked in making a rose composition, the most suitable one being that which is best adapted to the product for which it is to be used.

SHAVING CREAMS

A brushless shaving cream is prepared by emulsifying commercial stearic acid in water with the aid of a soluble salt of a sulfonated or sulfated carboxyl-free compound having an aliphatic radical with 10 to 18 carbon atoms in the molecule. The stearic acid may be replaced in part by hydrogenated oils, waxes or mineral or fatty oils. The creams may also be used as vanishing or cold creams and antiseptics, perfumes, etc. may be added. Proctor and Gamble, British Patent, 454,658, *Oct. 5, 1936.*

A brushless shaving cream contains an inorganic oxygenated acid ester of an aliphatic alcohol having at least 8 carbon atoms in the aliphatic chain, and water, the water being present in a major amount and the other ingredients in minor proportions. W. Kritchevsky (to Rit Products Corp.) Canadian Patent 361,734, Nov. 10, 1936.

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The COMPOUNDER'S CORNER

HAIR WAVING PREPARATIONS

According to H. Wentworth Avis, writing in "the Perfumery and Essential Oil Record," wave sets consist essentially of a gum mucilage, perfume, water and preservatives. Additional ingredients that may also be incorporated include alcohol, glycerine, coloring materials and sometimes a mild alkali. The gum content of such a material is obviously of primary importance by reason of its ability to hold the waved or curled hair in shape.

Among the more commonly employed gums are tragacanth, karaya, acacia, quince seed, Irish moss, dextrine, agar-agar, pectin and psyllium seeds. The fact that quince seed probably leaves the minimum of deposit on the hair is a valuable property, but the seeds require examination as to their dirt content and consequent tendency to moldiness. The mucilage may also be undesirably stringy unless carefully prepared. Only better grades of karaya and tragacanth should be utilized, inferior grades being of poor color and possessing low adhesive strength. Karaya gum has been said to be better than tragacanth in that it permits a clearer solution over a wider range of strengths, but tragacanth, because of its greater uniformity, retains a great measure of popularity.

Alkalies are often added to gum solutions, the most popular being potassium carbonate and borax, with the former having better solubility in alcohol and water. Borax makes acacia too ropy. Alcohol increases the speed of drying, acts as a solvent for the perfume used in the lotion, has some preservative action and assists in the dispersion of the gum without lump formation. Too high a concentration of alcohol will precipitate the gums and the concentration should rarely exceed 25 per cent. Denatured and isopropyl alcohols may be utilized. Water soluble perfumes must be used where alcohol is omitted from the preparation.

The best way to prepare quince seed mucilage is to make up a concentrated stock mixture and dilute as required. One pound of carefully cleaned seeds in three gallons of water are used with methyl para-hydroxybenzoate as the preservative. The seeds are added to the boiling water and actively stirred with gentle heating for 20 minutes. The mixture is allowed to stand overnight and then pressed or strained through cheese cloth. The mucilage should be of light color; dark colors will result from the use of inferior seeds or overheating. This mucilage is used in the formula given below.

Quince seed base 35.0, potassium carbonate 4.0, methyl para-hydroxybenzoate 0.2, alcohol 15.0, perfume 0.3, distilled water 45.5.

Powdered tragacanth 2.0, borax 2.0, methyl para-hydroxybenzoate 0.2, alcohol 10.0, perfume 0.2, distilled water 85.6.

Karaya 1.5, potassium carbonate 4.0, isopropyl alcohol 10.0, perfume 0.4, methyl para-hydroxybenzoate 0.2, water 83.9.

Ammonia is still the most popular ingredient in permanent wave solutions, despite its volatility. It can be used either as the base or as one of the volatile salts. The efficacy of a solution depends to a very large extent upon the process used for hair waving.

Ammonia (sp. gr. 0.88) 12.0, borax 3.0, water 85.0.

"Shux—We kin try the har-remover on pappy's haid, but he's sorta tetchy about his whiskers."

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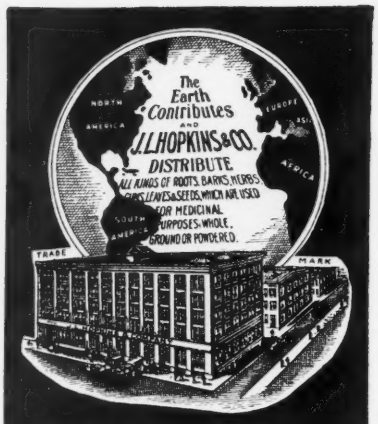

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Balsam Tolu	*Indian Gum (Karaya)*
Benzoin Gum	*Talcum*
Chalk (Precip.)	*Irish Moss*
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Cuttle Fish Bone	*Olibanum*
Gum Arabic	*Orris Root*
Gum Tragacanth	*etc., etc.*

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Sulfonated oils are often added just before the solution is used, to give an "oil" effect. The addition of a few per cent of a mixture of sulfonated oil and a vegetable oil will give a cloudy solution.

R. A. Auch discusses permanent wave solutions in "Soap, Perfumery and Cosmetics." Analyses of several commercial preparations are given, the ammonia figure being calculated as NH_4OH. The solutions run from 1 to 25.5 per cent of ammonia, some containing from 0.25 to 0.5 per cent of boric acid; about 10 per cent seems to be the popular concentration. Ammonium carbonate solutions contain 6, 7, or 8.5 per cent of ammonium carbonate.

Ammonium hydroxide (26° or 28%) 20, borax 5, water 75.

NEUTRAL OR ACID CLEANSING AGENT

Neutral or acid reacting washing and detergent agents are made by mixing a water-soluble salt of an aliphatic carboxylic acid containing an aliphatic radical of high molecular weight which is linked to the carboxyl group through at least one nitrogen atom, but not through an oxygen atom, with a compound of acid reaction such as sodium bisulfite, boric acid, citric acid, tartaric acid or oxalic acid. As salts of carboxylic acids of the kind in question there may be mentioned the alkali salts of octadecylenylaminoacetic acid and alkali salts of analogous carboxylic acids; the alkali salts of oleyl sarcoside and coconut fatty acid sarcoside. The cleansing agents thus obtained are neutral or acid and are very suitable for cleaning textiles sensitive to alkalies, for cosmetic purposes in the form of neutral toilet soaps, tooth pastes, hair washes and the like.

Ten parts of a mixture of 9.4 parts of the sodium salt of coconut oil fatty acid sarcoside (technical, 85% strength) and 0.6 parts of citric acid are dissolved in 90 parts of water. The result is a practically colorless, feebly viscous solution which is acid to litmus, may be diluted with any quantity of water and may be used as a liquid hair wash.

An acid hair wash powder is obtained by mixing 42.6 parts of the sodium salt of the sarcoside of coconut oil fatty acid of 85% strength, 54.4 parts of sodium chloride and 3.0 parts of sodium bisulfite. A 5% solution has a pH of 5.0.

A very foamy hair wash is obtainable by mixing 94 parts of the sodium salt of the sarcoside of coconut oil fatty acid with 6 parts of tartaric acid. This hair wash has the advantage over others in that it has a very good cleansing action but does not remove too much grease so that the hair remains lustrous and does not become brittle. Brit. Pat. 459,039.

PACKING DRUGS

In packing drugs it is necessary to bear in mind the worst conditions of temperature, etc. under which the product is likely to be stored, and, if the preparation is exported, to provide for prolonged exposure to temperatures around 120° F. It is probable that a majority of products would keep better if protected from light, such as cod liver oil, the vitamin A of which is rapidly destroyed, the production of free acid in chloroform; the yellowing of santonin; the darkening of certain bismuth compounds or mixtures, since certain bismuth compounds are reputedly photosensitive under certain conditions.

While it is easy to provide protection from light, it is a more difficult matter to prevent oxidation. Liquids liable to oxidation should be packed in small quantities and a minimum of air space left in the container. Stoppers or some other form of air-tight closure should be used in preference to corks, which, unless waxed, allow the passage of air into and out of the container. The difficulty of loss of volatile constituents is usually solved by the provision of an air-tight packing, but this is not always easy. On the other hand, air-tight packing is not advisable for effervescent preparations which are liable to evolve enough gas in hot weather to burst the bottle. The problem of absorption or loss of moisture is generally solved by the use of an air-tight container. Glass is not the stable impermeable material it appears to be since ordinary bottle glass is readily attacked by acid or alkaline liquids. In the presence of an acid liquid, soda is removed from the glass, the acidity of the liquid is reduced and the liquid may even become alkaline. Glass which has been in contact with acids will remove alkali from a liquid stored in it.

Collapsible tubes in contact with tooth paste will sometimes blacken; this can be avoided by the use of pure tin or tin coated tubes. N. Evers. Pharm. J.

MICRO-IDENTIFICATION OF CASTOR OIL

A saturated solution of potassium hydroxide in n-butyl alcohol appears to be a specific reagent for the micro-identification of castor oil. A small drop of the specimen under investigation is mixed with an equal quantity of reagent and observed under the microscope at a magnification of 430X. Characteristic rosettes identify castor oil. The procedure has been uniformly successful with all samples of castor oil tested, regardless of age or purity, but it is not applicable to the various grades of sulfonated castor oil nor to mixed castor fatty acids. The utility of the method for identifying blown castor oil is doubtful. It has not yet been applied to mixtures of castor oil with other fats. L. W. Greene, Am. J. Pharm.

WAVE SET GUM

Tab-Gum No. 116 is a gum product especially developed by G. Gilbert of Thurston & Braidich, New York, for use in the preparation of gum wave sets. The material is a fine white powder, a processed gum karaya which requires neither alkali nor glycerine to make a finished product. One part of the powder mixed with two parts of alcohol (ethyl or isopropyl) will make a wave set concentrate which will not set to a hard lump in the bottle and is easily dispersed in water to make the desired gum solution. One-half to one ounce of the gum per gallon of water will produce a finished wave set, 2 ounces to a gallon will make a quite thick solution while 6 to 8 ounces result in a jelly. These solutions are made in the usual way either by mixing the gum powder with an equal weight of alcohol and then adding the desired proportion of water or by adding the powder to heated water.

Solutions are very transparent, develop a high degree of stringiness on standing, and will not get thin or give up water. The deposit left on the hair is invisible and remains so, so that flaking need never be feared. Since this is accomplished without the use of glycerine, the lotion is very quick-drying. The solution is odorless and practically water-white and smaller amounts of color will be needed to give brilliant solutions. Since the powder is ready for use, no manipulation and adjustments of alkali and glycerine content are required.

DEPILATORY

A depilatory for removing human hair comprises strontium sulfide 1-6 and calcium carbonate 99-94 parts. The calcium carbonate may be replaced by the same proportion of strontium carbonate, powdered quartz, lithopone, barium sulfate, stannic acid or aluminum hydroxide. Other filling substances such as starch may also be added. J. D. Riedel-E. deHaen A.G., Brit. Pat. 451,611, Aug. 10, 1936.

COSMETIC POWDER

Instead of the magnesium or zinc salt, the free undecanic acid or other aliphatic acid with an odd number of carbon atoms is used. An example of a creamy powder contains zinc stearate 7.6, undecanic acid 0.4, glycerine 15 and water 10 parts. I. G. French Pat. 46,241, April 2, 1936, addition to French Patent 762,847.

SHAVING CREAM

To stearic acid is added an excess of ammonia together with glycerine and buttermilk, and the mixture is cooled immediately after saponification to avoid loss of ammonia by evaporation. The buttermilk may first be allowed to stand for 24 hours with 1% of borax and then made neutral to phenolphthalein with sodium hydroxide. S. Gelert-Nielson, Norwegian Patent 56,620, June 2, 1936.

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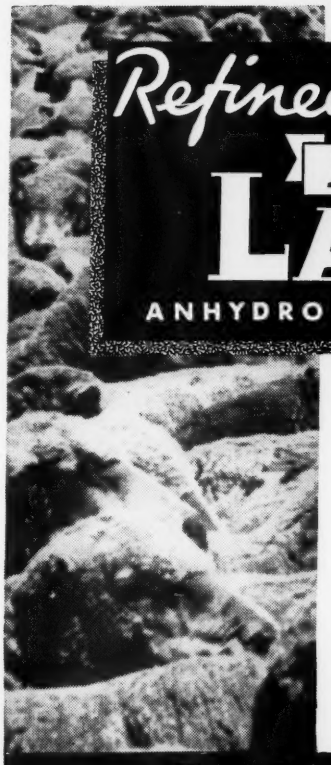

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ADVANCING THERAPY

PRONTOSIL-PRONTYLIN

Prontosil and its cousin Prontylin have received well-merited notice in the public prints for the remarkable cures they have accomplished in certain otherwise hopeless cases. At this point it is unnecessary, therefore, to give more than the slightest summary of their activity, but an interesting manufacturing point has come to light.

Prontosil is the Winthrop trade marked name for a patented compound, namely, 4-sulfamidophenyl - 2 - azo-7-acetylamino-1-hydroxynaphthalene 3, 6-disulfonic acid whose chemotherapeutic effects were first demonstrated by Domagk in 1935. It is employed in the form of the disodium salt in a 2.5 per cent. aqueous solution for intravenous or intramuscular injection. Another, less soluble type of Prontosil, consists of 4-sulfamido-2, 4-diaminoazobenzene, which is successfully administered in tablet form.

It was found, however, that a much simpler chemical compound, not patented, but trade-marked by Winthrop as Prontylin could also be effectively administered in tablet form. This compound is chemically para-aminobenzenesulfonamide, and since its manufacture is not limited by patent, it is available from several sources under the name of Sulfanilamide. This last is expected to be the generic name to be accepted by the Council of the A.M.A.

MANDELIC ACID REPORT

The Council of the A.M.A. has published a preliminary report on mandelic acid which indicates fairly definite approval on the part of that august body. In the search for an organic acid that could be administered by mouth, make the urine bacteriostatic, and be excreted unchanged in the urine, Rosenheim discovered that mandelic acid possessed these qualities. He reported that it had no deleterious effect and that it was excreted in the urine in practically an unchanged form and in a concentration sufficient to be bactericidal. Since his report the drug has been further employed and is being put out by a number of manufacturers of pharmaceuticals. It has been common experience that the drug will eliminate bacillary infection in a high percentage of uncomplicated cases. In use, the urine must be kept at a pH of 5.5 or lower for full bactericidal effect and the liquid intake must be limited. If sodium mandelate is employed, it is usually necessary to administer some drug, such as ammonium chloride, in order to obtain the desired degree of acidification. When these precautions are observed, the urine usually becomes bactericidal in the course of two or three days, and bacterial elimination usually occurs within six or seven days. There is no clinical evidence to indicate that it is a severe renal irritant in the presence of a normal renal function, provided it is not continued longer than two weeks. Its use is contraindicated when there is evidence of renal insufficiency because of the possibility of causing renal irritation and since it is usually not excreted in sufficient concentration to be bactericidal.

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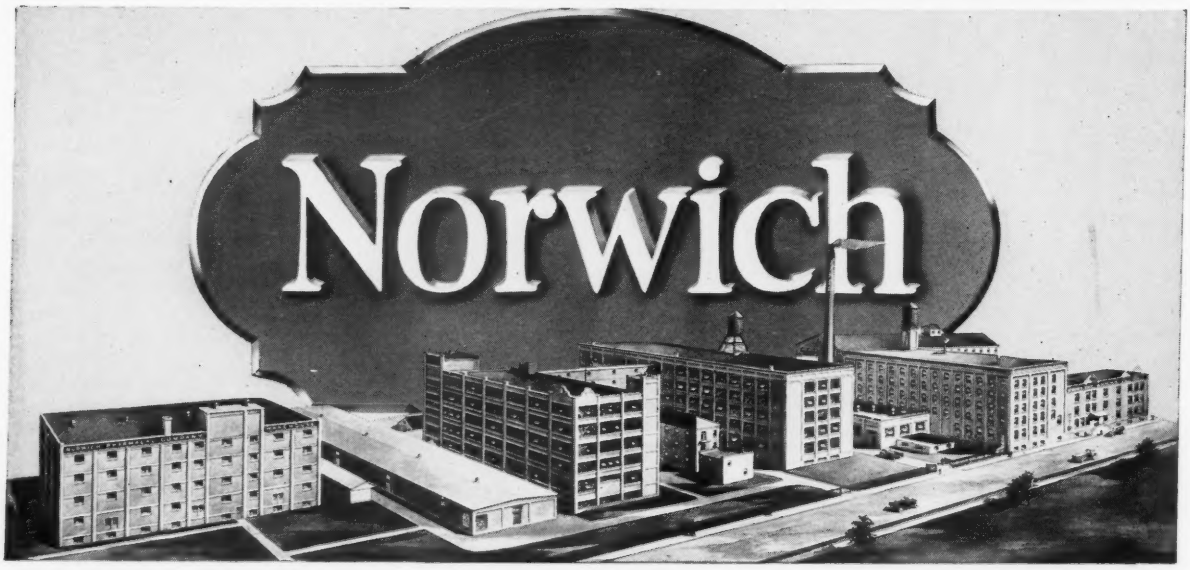

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a teaspoonful to a tablespoonful before meals. *Strasbourg Medical.*

OILY SKIN TREATMENT

There is no doubt that the restriction of fats and carbohydrates will lessen in some degree the production of sebum; but it is never sufficient alone to correct oversecretion. The patient must be examined thoroughly and any underlying disorder, such as anemia, constipation or focal infection, corrected.

Washing the face with hot water and soap, applying hot towels for ten minutes or more, then cold water and a brisk rub, has a good effect. It should be done at least once daily, better both morning and evening. This with the use of a face powder containing 1 or 2 per cent. sulfur or 3 per cent. salicylic acid may be sufficient. If not, lotio alba (sulfurated potash and zinc sulfate, of each 2 Gm. in 60 cc. of rose water) may be applied at night after the washing and hot packs. This is to be shaken, dabbed on and allowed to dry. In the morning the face is washed as usual with soap and water. When the face becomes dry and scaly, whether generally or, as often happens, about the angles of the mouth, treatment must be suspended on the scaly area. If sulfur is not well borne, salicylic acid, from 1 to 3 per cent. may be used in alcohol.

Ultraviolet exposures daily or every other day, or sun baths, have a decided drying effect. The risk of increased freckling or tanning must be taken. It is temporary. The same may be said of roentgen treatment, which in divided doses of from 37.5 to 75 roentgens each week is the most powerful of all methods and gives the most lasting effect. It should not be carried further than a total of three erythema doses (900 roentgens) for fear of late untoward effects.

For the oily scalp, lotio alba, which here may be used in double strength, 4 Gm. of each of the ingredients in 60 cc. of rose water, may give prompt amelioration. It should be well shaken, put on the scalp with a medicine dropper, and rubbed in with the fingers. The salicylic acid alcohol may be used in the scalp with good effect, the strength increased to 5 or 10 per cent. Ether, 10 or 20 per cent., may be added to dissolve the grease, which can be removed to some extent by rubbing the scalp with a paper towel. Frequent shampooing once or twice a week is called for. In spite of the fact that brushing and massage bring out sebum from the follicles, they should not be neglected, for their aid in increasing circulation is invaluable. Especially is this true in cases in which the hair is falling too rapidly. Sunlight exerts a beneficial effect, as does ultraviolet radiation. Going without a hat in a sunny climate or daily exposures to ultraviolet rays will be beneficial. J.A.M.A.

CATHARTICS

Cathartics have been divided into various groups, such as laxatives, hydrogeogus and drastics. One of the most convenient groupings is the following:

1. Drugs, such as liquid petrolatum, that act only mechanically by reason of their bulk or consistency.

2. Drugs, such as agar, that act by absorbing and holding water, and thereby preventing its absorption from the bowel.

3. Saline cathartics, such as magnesium sulfate, that act partly by preventing absorption of water and partly by a direct action on the bowel wall.

4. Drugs, such as cascara sagrada, containing a quinone group. These act mainly on the colon.

5. Drugs, such as podophyllum, containing a resinous body, which is slowly broken down, releasing an irritant principle.

6. Drugs, such as castor oil, containing unsaturated fats.

7. Inorganic drugs, such as mercury and sulfur.

These agents can be divided into two general groups based on their therapeutic use:

1. Those employed for an acute condition.

2. Those employed for longer periods, (as in chronic constipation or edema). Magnesium Sulfate is probably the most widely used purgative. It is efficient in action, rarely causes discomfort, has few undesirable side-effects, and the principal disadvantage is an unpleasant taste, which may be eliminated to a large extent by dissolving the salt in some palatable fruit juice. Its mode of action is characteristically that of the salines.

Milk of Magnesia, is palatable to most persons and is especially easy to administer to most children. Its alkalinity makes it particularly desirable in hyperacidity, and it neutralizes hydrochloric acid in the stomach without the liberation of carbon dioxide.

Seidlitz Powders form one of the most palatable mild laxatives available.

The sodium phosphates comprise several preparations, all of which are inexpensive and fairly satisfactory in their effect.

Sodium Phosphate is not often prescribed as such. It is extensively used in some proprietaries. Effervescent Sodium Phosphate is a granular powder which, when added to water, forms a fairly pleasant carbonated drink.

Sodium Biphosphate frequently called sodium acid phosphate, is an excellent laxative and is frequently used to acidify the urine.

Castor Oil would probably come next to magnesium sulfate in popular usage, at least if bulk is considered. Principal disadvantage in its use is psychic inhibition.

Calomel is rapidly falling into disuse. To a large extent the same may be said of Mass of Mercury, and Mercury with Chalk.

Phenolphthalein is increasing in favor with the profession, even as a prescription ingredient. It is largely without toxic action and, though skin eruptions sometimes occur, it is a fairly safe and reliable laxative and is so easily administered, even to children, that its place in therapy has been easily established.

Liquid Petrolatum, U. S. P., continues to hold a prominent place in the treatment of chronic constipation and some kindred disorders.

Cascara Sagrada as now put on the market is not only effective but almost free from discomfort.

Sodium Sulfate, is again coming into popularity.

Agar is seldom a prescription ingredient but often is employed to give bulk to the intestinal content.

Senna, U.P.S., is a popular domestic remedy. It is sometimes employed by chewing the leaves, but more frequently by making them into a tea.

Rhubarb and its preparations and sulfur in its various forms are still used, though with decreasing frequency.

CRYSTALLINE VITAMIN A

Preparation of yellow crystals from fish liver oil, which in all probability are pure Vitamin A was announced by Dr. Harry N. Holmes, of Oberlin College, and his research assistant, Miss Ruth E. Corbet.

This is the first time that anyone has succeeded in producing a concentration of Vitamin A in crystalline form. Dr. Holmes declined to state positively that his concentration is pure Vitamin A until confirmatory tests now going forward at Pennsylvania State College are completed.

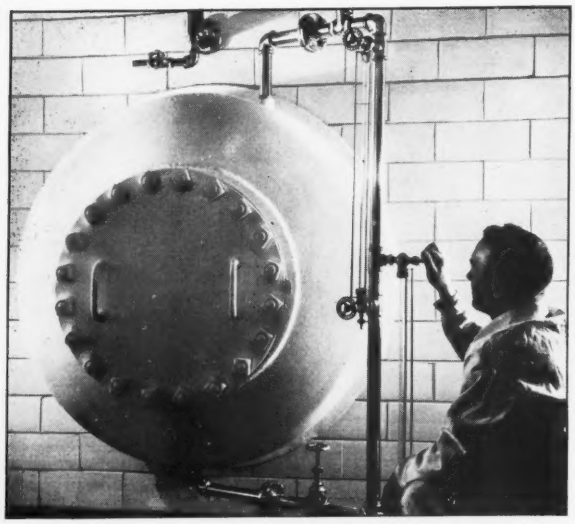
There is a slight possibility that Dr. Holmes has prepared a mixed crystal, a combination of vitamin A and something else. The evidence, however, is against this, since the crystal has a sharp melting point, one of the indications of a pure crystal.

Dr. Holmes and Miss Corbet began their researches with the non-fatty portion of the liver oil of a Japanese fish called the ishinagi.

This was then frozen with the aid of carbon dioxide snow, or "dry ice." By careful regulation of the freezing process one impurity after another was removed until only a pale yellow crystalline substance remained. These crystals are believed to be pure Vitamin A.

At a temperature between 5.5 and 6 degrees Centigrade the crystals turn into a sticky yellow liquid.

Preliminary tests, Dr. Holmes said, indicate that Vitamin A is composed of about 83.5 per cent. carbon, 10.5 per cent. hydrogen and the balance oxygen.



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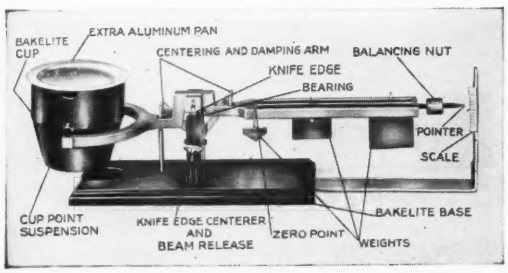

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EMPIRE STATE BUILDING, NEW YORK

readers'

AQUEOUS SYRUP OF ASPIRIN

I manufacture an aqueous syrup of aspirin and potassium citrate but am having some difficulty as the aspirin partially splits up into acetic and salicylic acids. Do you know how this decomposition can be prevented? We tried sod. hyposulfite to no apparent avail.

I am interested in the use of potassium sulfocyanate for certain mental ailments. Can you inform me of the psycho-therapeutic properties of this chemical? I have been unable to find any information here. Trenton.

The breakdown of the aspirin that you mention is unfortunately a natural hydrolytic process that, to our knowledge, always takes place when acetylsalicylic acid is kept long in the presence of water. One suggestion for lessening this breakdown involves the use of a buffer solution but potassium citrate is about as effective a buffer as any other compound you might use. Sulfocyanides or thiocyanates have been advocated for use in mental ailments on colloid-chemical grounds by Wilder Bancroft at Cornell University; we have no specific references on this subject but you can get information either by writing Professor Bancroft or by checking issues of the "Journal of Chemical Physics."

PERMANENT WAVE SOLUTION

We put out several permanent waving solutions but understand that the one minute machine requires a faster solution and as our chemist is in the hospital we are turning to you for the above information. Boston.

It is our understanding that these faster solutions merely contain higher proportions of alkaline substances. We, therefore, suggest that you experiment with mixtures containing from 50 to 100 per cent. more ammonia and possibly borax, if present.

NON-SOAPY FOAM

We would appreciate it very much if you could give us some information as to what is used to make a non-soapy foam and what substance is used as a carrier. Chicago.

In the December 1936 issue of DRUG AND COSMETIC INDUSTRY we had an article called "Foam-Big Business in Bubbles" which went into the subject of foam baths pretty thoroughly. One of the best materials to be used for this purpose is saponin or powdered soap bark. If the more powerful saponin is used it may be extended by means of sodium sulfate. Other possibilities are described in the July 1936 issue of this magazine.

CREAMS

I am having trouble with my cleansing cream in that it takes up or gives off moisture. The product contains mineral oil, borax, spermaceti, beeswax and water. Will the addition of cetyl alcohol prevent this?

In addition, could you furnish me with a formula for a hand cream and brushless shaving cream? New Orleans.

You are not at all specific as to just what the trouble with your cleansing cream is since, obviously, the cream will not both take up and give off water. Cleansing creams with the formula you mention may sometimes dry out in the jar since they are oil-in-water emulsions. About the only successful way of retarding this drying out is to make sure that the jar is tight. If on the other hand, you notice moisture on either the liner or the surface of the cream when you open a capped jar that is due to the fact that the jars were covered while still warm. Cetyl alcohol does have some effect in retarding the evaporation of water.

Brushless creams are the subject of an article in this issue of this magazine, and hand creams can be made by the addition of several per cent. of lanolin to the usual vanishing cream or brushless shaving cream formula.

EFFERVESCENT BATH SALTS

We are interested in effervescent bath salts and would appreciate any information on this matter that you can give us. Philadelphia.

Effervescent bath salts consist of mixtures of carbonates and bicarbonates with solid organic acids. The acids preferred are citric and tartaric or mixtures of these two, although sodium bisulfate is sometimes used. Sodium bicarbonate per unit weight, will liberate more carbon dioxide and thus give more effervescence, but it has little, if any, water softening power. Sodium carbonate, on the other hand, may be too alkaline if used in too large a quantity. On the basis of equivalent weights, carbonate and bicarbonate should be in excess over the acids so that the net result would be a slightly alkaline reaction in solution. Sodium chloride and sodium sulfate may also be added as diluents, while starch is useful in preventing attack by moisture. A suggested formula would consist of sodium carbonate 200, sodium bicarbonate 200, sodium chloride 1000, tartaric acid 150, citric acid 150, starch 100. A recent article on the manufacture of effervescent tablets in this magazine should give you some valuable information.

BABY CREAM

I have worked out a formula for a baby cream containing lanolin, absorption base, and vitamin F. This gives good results, but I was wondering if a neutralizing agent to neutralize ammonia might not improve this product. Could oleic acid give the desired results? Madison.

Oleic acid will probably serve your purpose but one per cent. of lactic or citric acids dissolved in the water incorporated in the cream would probably be better. These acids can easily be added to absorption base or lanolin creams but will break down beeswax-borax type creams.

MILK SOAP

Local dairies are selling a soap which is said to contain 80 per cent. milk according to the label on the package. They recommend that this product be used within thirty days, which would indicate that the milk deteriorates after a certain time. Have you got any suggestions for formulating milk products such as these? St. Louis.

We cannot see how milk itself serves any purpose in the soap. However, by the use of casein it might be possible to make such a product and claim the use of milk without gross mislabeling. Only the Federal Trade Commission, however, could pass on this. Casein itself has some detergent powers and may also act as a buffer in reducing alkalinity. Unless preserved, this casein would not be especially stable and the method of incorporating it in soap is available only in the literature on that subject.

questions

HAIR DYE

As a subscriber to your very valuable publication, I would deem it a favor if you would supply me with the following information. I manufacture various tints of hair dyes but have had complaints that the stain is easily removed by washing, although I use only the purest chemicals available. For your guidance I am enclosing a formula for the light brown shade of the dye. A teaspoonful of this dye is used with a teaspoonful of oxygen water. I should appreciate any suggestions you can give as to how this dye can be made more permanent. Rio de Janeiro.

Our knowledge of hair dyes, at least for the present, is strictly limited, and until we have completed a search of the literature now in progress we can only speculate as to the source of your trouble. The dye you describe is a paraphenylene diamine type, which requires oxidation for development. Your customers are probably not permitting enough time to elapse between the application of the dye and the time when they wash their hair. Or you might supply a stronger solution of hydrogen peroxide than is ordinarily available in drug stores to oxidize the dye more rapidly.

GLYCERINE SUBSTITUTE

We wish to know if you could give us the name of a substitute to be used in the place of glycerine for the purpose of preserving botanical preparations? Also a substitute for alcohol used for the same purpose? The price of glycerine has gone up so high that there is no longer any profit in making preparations of this kind. Detroit.

In place of glycerine you might use the various glycols that are often used as substitutes, but their price does not seem to be especially lower and if your preparations are for internal use, toxicity data on the glycols is not complete. If however, you will use a strong solution of sugar containing a small amount of sodium benzoate or other preservative, you will probably get the right kind of preservative effect. As a substitute for alcohol, isopropyl alcohol may be used, but this too is not guaranteed harmless for internal use.

VITAMIN F

I should like to know exactly what the 1-1-3 recommended for use in formulation of creams means? Is it one gram of lecithin, one gram of cholesterin, and three grams of linoleic acid, or vitamin F? That seems a large quantity of free fatty acid to put on the skin. I had always understood that more than one or two per cent. of free fatty acid in a cream would be irritating to the skin. Pittsburgh.

The 1-1-3 does no necessarily refer to grams but merely to the ratio between the three constituents you mentioned; lecithin and cholesterin should be present in equal proportions and vitamin F in amount three times as great, regardless of whether the units are one ounce, one gram, or one tenth of a gram, etc. Therefore, if the total proportion is small enough, you need not fear irritation from excess of free acid. Moreover, if you use vitamin F, not merely linoleic acid from any source you will probably not have to worry about irritation at all. The prices you mention for lecithin and cholesterin are pretty close to the generally prevailing prices, and we do not believe you could do much better in small quantities.

STATISTICS

We are interested in the cosmetics business from the standpoint of investors; we are also interested in that business as a reflector of the trend in the consumer purchasing power. The contention has been made to us that this business is one of the sensitive indicators of the shifts in the purchasing power and attitude of the public, and while we have not had an opportunity to make a specific check of such an idea, it has a certain plausibility. It has also been suggested to us that perhaps you have, or can direct us to the most reliable information and factual studies in this field which might be of service to us in such an investigation.

I do not know whether this is correct or not, but if it is correct and is consistent with your position, we would be very glad to have any suggestions or guidance which you may be in a position to supply us. New York.

We do not know of any specific studies along the lines you describe in relation to the cosmetic industry, but feel that the original contention, namely, that cosmetic sales sharply reflect consumer purchasing power is quite true. The major difficulty in working along these lines lies in the fact that adequate statistics on cosmetic business are not readily available. The material we publish monthly is about as good an index as any. The chart of wholesale sales of cosmetics shows how retailers are buying either in anticipation or in fulfillment of demand, and seems in general to run closely parallel to business conditions. More directly perhaps, the various charts based on Federal Reserve figures that we also publish show the trend of consumer purchases of cosmetics; this data is corrected for seasonal variation and differs from the original figures in that continuous index numbers have been calculated.

EPSOM SALT OINTMENT

We are interested in a formula and process for making an ointment of epsom salts and glycerin to use in place of the old style wet dressings of a saturated solution of the salt in glycerin. We have experimented somewhat along this line but have had trouble with the ointment which becomes gritty after standing for about four days. We have seen a similar product which does not harden but which seems to begin to separate after about two or three months. Battle Creek.

Epsom salts dissolved to the saturation point in glycerin are likely to be incompatable with and cause breakdown in most creams. A possibility that suggests itself however, lies in the use of this solution with lanolin, or absorption bases or both. These products will often form stable creams with substances which immediately break down standard cold cream formulas. It may be necessary to include a certain amount of mineral or other oil in the cream in order to make it rub out more smoothly. As a suggestion, you might try a mixture containing 30 parts of absorption base, 10 parts of mineral oil, 10 parts of petrolatum, 5 parts of paraffin and 45 parts of the glycerin solution. Melt all the ingredients except the glycerin and epsom salts together, allow to cool to 30-35°C. and then thoroughly mix in the glycerin solution a little at a time. It is not likely that this mixture will act at all similarly to the wet dressing since this will be a water-in-oil emulsion.

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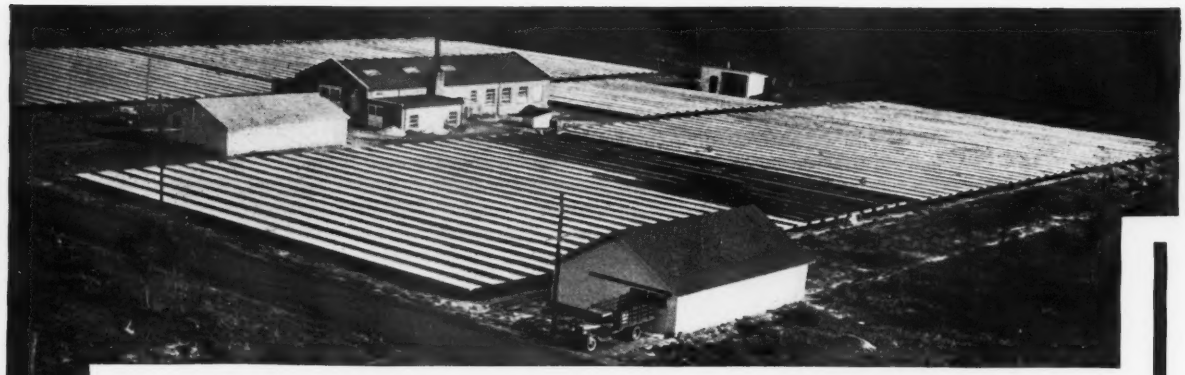

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Terpeneless 25c
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Calamus oil $2.00
Candelilla Wax ¼c
Carnauba Wax No. 1, 1½c
Cascara sagrada 1c
Cedar leaf oil 10c
Cedar wood oil 3c
Civet $1.00
Clove oil 13c
Cocoa butter 1¼c
Cream tartar ¾c
Culvers root 1c
Damiana leaves 1c
Echinacea root 13c
Ipecac root 20c
Lime distilled 40c
Linalyl acetate 10c
Lycopodium 30c
Mace oil 15c
Manganese glycerophosphate 10c
Methyl cinnamate 30c
Nutmeg oil 25c
Papain 10c
Peppermint oil, Nat. 20c
Redistilled 25c.
Pimento Berry oil 25c
Leaf oil 60c
Rosemary oil 1c
Rue oil 90c
Saffron, Spanish $3.50
Sassafras oil, Art. 7c
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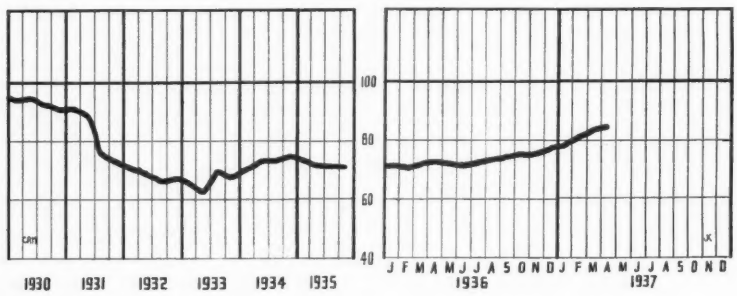
Sodium glycerophosphate 10c
Spearmint oil 15c
Tansy oil 25c
Tartar emetic 2c
Tartaric acid 1c
Terpinyl acetate 5c
Tragacanth gum No. 1, 20c
No. 2, 15c
Vanilla beans, Bourbon 75c
Mex. cuts 75c
Mex. whole 75c
Wahoo Bark of Tree 2c
Wormseed oil 15c
Zinc oxide 1c

Down

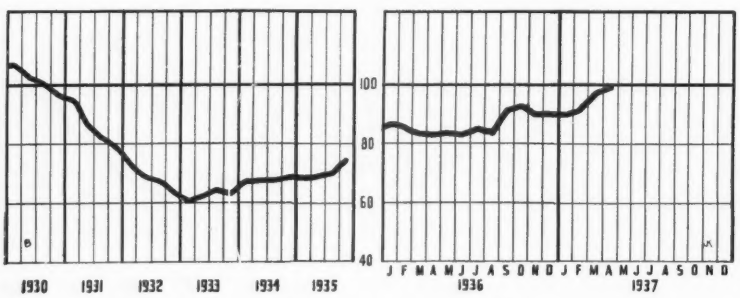
Acetylsalicylic acid 5c
Anise oil 15c
Arnica flowers 1c
Bismuth Subcarbonate 17c
Subgallate 17c
Subnitrate 17c
Buchu leaves 12c
Citronella Java 2c
Cod liver oil $1.00
Cubebs 15c
Dandelion root 1c
Digitalis leaves 2c
Elm bark 2c
Ergot 5c
Geranium Bourbon 60c
Henbane leaves 1c
Horehound Herb 1c
Kamala 6c
Lemon grass oil 7c
Menthol 5c
Myrrh gum 10c
Orange Oil, American 50c
Psyllium seed, French ½c
Santonin $5.00
Saw Palmetto berries 1c
Valerian root 1c
Wahoo Bark of root 5c

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



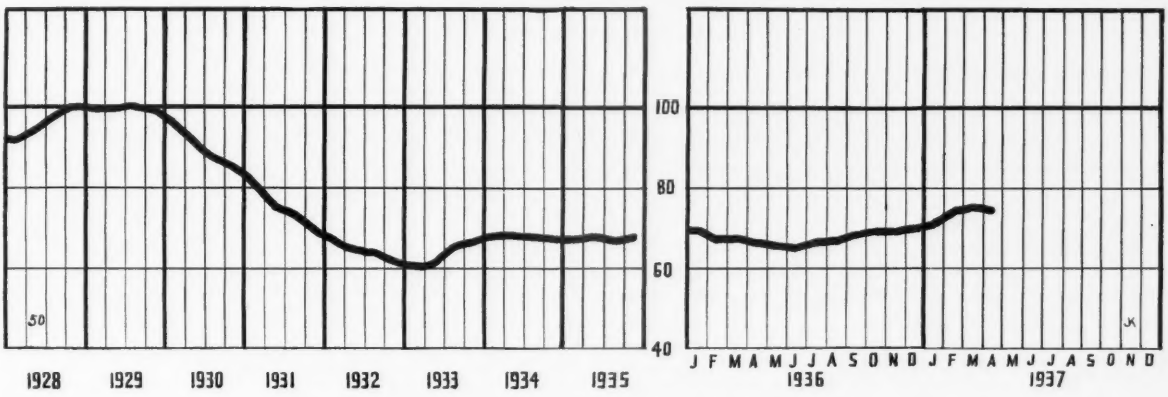
The cosmetic raw materials index rose from 83.8 to 85.0. Almond meal increased from 18 to 22 cents; candelilla wax was up ¼ cent at 16 cents; menthol decreased 5 cents to $3.25; tragacanth continued up, reaching $3.00 a pound; zinc oxide advanced one cent to be quoted at 9 cents a pound. Gum tragacanth has advanced consistently since July last when the market price was at $1.30 per pound spot.

15 Botanicals—Weighted Price Index. 1926 = 100.



The botanicals index rose sharply and is now extremely close to 1926 parity at 99.6. Buchu, digitalis and ergot declined, but the net rise was due to increases in agar, cascara and ipecac. Agar continued to rise, reaching $1.05; buchu declined to 68 cents from the previous 80; cascara sagrada was one cent higher at 14 cents; digitalis declined from 26 to 24 cents; ergot also declined from $1.95 to $1.90; ipecac rose from $1.05 to $1.25.

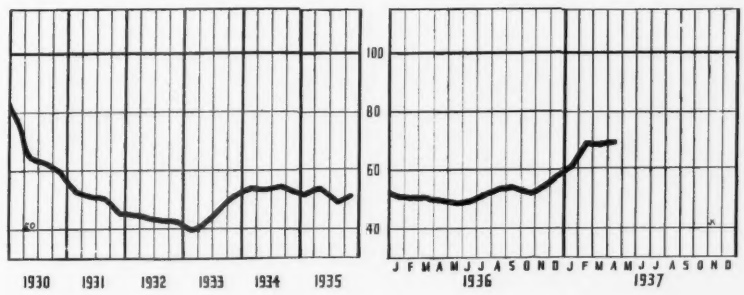
50 Raw Materials—Weighted Price Index. 1926 = 100.



A decline in the medicinal chemical price index over balanced rises in botanicals and essential oils and resulted in a net decline in the 50 commodity index from 75.2 in March to 75.0 in April. The raw material markets in general continued in a very firm position. Prices are rising all over the world. The drug and cosmetic industry, depending as it does on raw material contributions from practically every country in the world, is one of the first of the major industries to directly feel the effect of rising prices. It is generally anticipated that the trend of prices will be toward higher levels rather than otherwise.

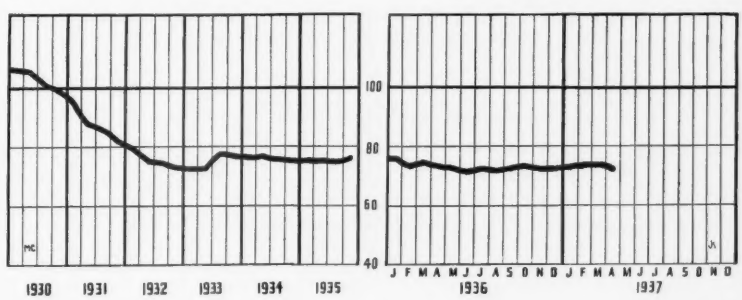
15 Essential Oils—Weighted Price Index. 1926 = 100.

Essential oils averaged somewhat higher in price, the index in April being 69.3 compared with 68.9 in the previous month. Anise declined 15 cents to 75 cents; citronella dropped 2 cents to 43; clove oil increased from $1.22 to $1.35; natural peppermint oil advanced from $2.25 to $2.45. The change in the price of peppermint oil was a reflection of the primary market position and placed this item on spot more in line with the cost for shipment goods.



15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.

Three price changes, all downward revisions, dropped the medicinal chemical index from 73.5 in March to 72.7 in April. Acetylsalicylic acid was marked down from 50 to 45 cents; cod liver oil lost one dollar a barrel to be quoted at $25.00; menthol changed from $3.30 to $3.25 a pound. The spot market on menthol was somewhat more competitive because of recent heavy arrivals and the wider distribution of the article among sellers.



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CLOVE OIL

Production costs for clove oil continued to rise and spot quotations were again advanced by the makers. In drums the price was $1.35 and in cans the range was to $1.38 per pound.

The Zanzibar Protectorate, having decided that it was in the best interest of their island to encourage production of the oil domestically, instead of exporting the stems, some time ago took normal steps to give effect to that decision.

Clove control by the Clove Growers' Association in Zanzibar was tightened, the position of the Association being considerably strengthened by the statistical position of this item at the present time.

The last crop of both Zanzibar and Madagascar cloves was small so that the surplus from previous crops has been used up. The quality of the last crops was also poor because of the very wet weather prevailing during the clove drying season.

The last crop of Zanzibar cloves was said to be not over 25,000 bales, whereas a normal production ranges from 70,000 to 80,000 bales. The Madagascar crop is quite variable ranging from 40,000 to as high as 100,000 bags. The last crop of Madagascars was also short but no actual statistics were available. It is, however, the Zanzibar cloves that are principally used for making clove oil.

Although the United States is not considered an exceptionally large buyer of cloves, consumption is great in India which consumes from 25,000 to 50,000 bales of all grades in a year. Ten years ago Java annually consumed only 2,000 bales. Now it is said that 40,000 bales are consumed there annually. This tremendous increase was occasioned by the popularity of cigarets flavored with clove.

Predictions are already being made to the effect that the next crop of cloves will also be short. It is rather unusual to have two succeeding short crops of cloves. If present predictions prove true the next crop will be the third in succession to be below normal, as the 1935 crop was also poor.

At any rate prices for spice have advanced from 13c to 17¾ to 18c per pound and futures are selling at 19½c for Zanzibars and 18 to 18¼c for Madagascars. One factor in the market stated his opinion that prices would go 5c per pound higher than the above quotations while another factor stated that he would not be surprised to see cloves at 30c per pound.

As far as predictions regarding the next crop are concerned it might be recalled that the clove industry is the greatest source of income in the producing countries and they have naturally always been a favorite item for speculation. The situation, however, has all the characteristics of a continued strong market for some time.

OLIVE OIL

With spot stocks small and uncertainty prevailing concerning future supplies, the market for olive oil continued to be characterized by a firm tone. Quotations were largely still nominal.

Indications are that Italy is confronted with a serious olive oil shortage. The small crop of olives harvested last year is reported as the chief reason for this shortage in Italy. Contributing causes are the smaller olive crops in other Mediterranean countries, the resulting decline in Italian imports, and the further depletion in Italian supplies as a result of a heavy export movement.

The 1936 olive crop in Italy was officially estimated to be 27 per cent. below that of 1935, according to a report by the U. S. Department of Agriculture. This would mean a production of only about 162,000 short tons of olive oil, compared with 225,000 tons in 1935-36 and with the annual average of 224,000 tons during the six years ending with 1934-35. Dealers report a considerable part of the 1936 crop of olives was off-grade and is producing inferior oil.

As olive oil is the chief fat consumed in Italy, a number of measures have been adopted to offset the shortage. The principal measure was the imposition on January 28, 1937, of an export tax of $3.60 per 100 pounds on all olive oil exports. Wholesale and retail prices have also been fixed.

The present olive oil situation in Italy, and especially the imposition of an export tax may affect this season's supply of edible olive oil in the United States.

Italy is the world's largest exporter of refined olive oil. Average exports during the four years ending with 1935 amounted to 23,000 short tons of edible and 8,000 tons of inedible oil annually. The United States is by far the most important single export outlet.

Normally the United States produces only between 1 and 3 per cent. of its olive oil consumption, the balance being imported mainly from Italy and Spain. Italy supplies approximately 88 per cent. of the packaged olive oil imports of the United States and about 24 per cent. of the oil imported in bulk.

The shortage of olive oil in Italy, coupled with the prohibition of exports from the important olive-producing districts of Spain and the decreased production of olive oil in the rest of the Mediterranean Basin countries, is expected to greatly limit the sources of supply of edible olive oil for the United States during the present season.

COD LIVER OIL

The spot market for cod liver oil has eased off a little to $25 and $27 per barrel. This condition does not reflect the true position of this item however but is rather a reflection of the seasonal decline in consumption.

Bergen reports very favorable weather conditions prevail and fishing results continue exceptionally good, as follows: March 13, 57,766 tons of cod and 31,067 hectol. of oil, compared with 43,001 tons of cod and 22,104 hectol. of oil on the same date in 1936, and 34,205 tons of cod and 21,570 hectol. of oil in 1935. This is about a normal production.

Cod liver oil quotations in Norway have declined only slightly despite the satisfactory outlook for fisheries in both the Lofoton and Finmark districts. This is due, it is reported, to shortage of stocks. At the beginning of February old stocks had been liquidated and dealers were reported to be experiencing difficulties in obtaining adequate supplies. As evidence of the prevailing shortage, it has been pointed out that local producers in northern Norway usualiy hoard quantities of oil to place on the market just before the new cod fisheries begin when money is needed to fit out the fishing fleet. In 1936, high prices brought these hoarded stocks on the market during the fall months.

The United States imports of cod liver oil shattered all records in 1936 reaching a total of 5,790,000 gallons, valued at $3,547,000, against 4,600,000 gallons, valued at $3,000,000 in 1935. Approximately 60 per cent. of the total during each year came from Norway, with Iceland and Newfoundland supplying the bulk of the balance.

The tremendous exports of cod liver oil to the United States is evidently now having some effect on the Norwegian shipment market. Shipments to the American market during January, 1937 amounted only to 44,000 gallons as compared to 108,223 gallons in January 1936. This situation is said to be causing some concern among Norwegian oil exporters.

COLOCYNTH

A much firmer market prevails in this item. The current market price of from 70c to 75c per pound is a considerable advance from the 55c level that prevailed at the close of the year.

For some years the supply of colocynth was in excess of the demand. Last year, possibly because of the poor prices prevailing, the Sudan crop was unusually small. There was also a noticeable improvement in demand and in consequence shipment prices turned materially firmer. The source now reports all stocks cleared with no carryover from this year's crop.

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PAPAIN

Papain advanced in the spot market 10c per pound during the past month. This was the first show of strength in this item for some time. The current price range for pure powdered papain is now from $1.10 to $1.15 per pound. The more active season for this item is now at hand and a continued firm market is in prospect.

The use of papain in the United States has increased rapidly in recent years judging from import statistics, which indicate that our consumption in 1936 was three times greater than during the year 1932.

Papain is the dried milky juice obtained from the skin of the unripe tropical papaya fruit.

In the United States papain has long been used in medicine and pharmacy as a digestant. While the papaya fruit flourishes throughout tropical and subtropical regions, Ceylon is the only country which produces it in large quantities.

During the first 10 months of 1936 Ceylon exported a total of 212,000 pounds of papain compared with 155,275 pounds shipped from the Island during the whole of 1935 and 100,000 pounds during the preceding year. Formerly the bulk of the output was shipped to the United Kingdom but at present approximately 60 per cent goes direct to the United States.

Preliminary statistics show that the United States imported 174,000 pounds of papain last year, 113,000 pounds coming direct from Ceylon, and 52,000 pounds from the United Kingdom, with smaller shipments originating in Nicaragua, New Zealand and Siam. In 1935 imports of papain were recorded at 116,000 pounds, and in 1932 only 54,500 pounds of papain were brought into the United States.

ANISE OIL

Anise oil declined on the spot market from its previous high position. The range is now from 75c to 80c per pound. The local situation has become easier since the arrival of recent shipments which relieved the spot shortage.

It might be stated, however, that the shipment market is in anything but a normal position and while some material has been obtainable in the replacement market the certainty of receiving regular replacements is anything but satisfactory.

The market position of this item is therefore still uncertain and subject to further fluctuations.

Dealers in Hong Kong during 1936 were unable to meet the unusually heavy demand for anise oil from both the United States and Europe and many offers had to be turned down. As a consequence, prices rose sharply in the primary market. The sale of this oil is controlled by a monopoly of the Kwangsi Provincial Government in China which maintains an office in Hong Kong.

MENTHOL

The position of Japanese menthol on the spot market was slightly lower during the period under review. Prices ranged from $3.25 to $3.35 per pound in case lots and smaller quantities. This spot position was due to the multiplicity of holders of menthol rather than being a reflection of the shipment market. There was some local competition induced by some of the smaller factors who were in a position to move small lots at slightly lower prices because their material had been acquired at prices lower than the present Japanese market.

Arrivals continued heavy during the past month although little new business was being done at present price levels. The Japanese shipment market was firm because of heavy shipments to this market on previous contracts. The end of March is expected to see most of these early contracts completed and it is reported that some reaction in Japan may be expected when it is realized that the present volume of shipments will not be maintained.

Some factors now feel that disregarding the unpredictable such as possible price inflation, etc. the next few months should see a somewhat easier shipment market.

CITRUS OILS

The market for lemon oil was exceptionally firm and the prospects leaned toward a further advance if anything. California oil was not offered in abundant quantities. Some concern was felt regarding domestic lemon oil as the larger consuming season is about to get under way. Italian stocks were strongly held. Stocks in Italy were far less than normal in size and were thought to be insufficient to meet the demand from most consuming countries.

There was less concern felt regarding the supply of orange oil that will be available for the season of heavy consumption. California oil will probably be plentiful because the freeze this winter made more oranges available for oil. Already there has been a price reaction on the American cold pressed oil of some 50c per pound establishing the market at $2.75. The price is still being maintained for Italian orange oil but it is problematical as to whether the position in Italy can be maintained should a further price disparity and plentiful supplies be available from other sources.

Exports of orange oil from French Guinea during 1936 were expected to show an increase over those of 1935, shipments for the first 10 months of the year reaching 185 tons. In 1935, 210 tons were exported. The progression of the industry in French Guinea is evident in exports in recent years, as follows: 1929, 1 ton—1930, 12 tons—1931, 34 tons—1932, 77 tons—1933, 104 tons—1934, 144 tons and in 1935, 210 tons.

PEPPERMINT OIL

Peppermint oil has finally turned stronger in the spot market and now more fully reflects a condition that has prevailed in the primary market for several months. Natural oil is quoted at from $2.45 to $2.70 per pound with the redistilled oil being offered at from $2.75 to $3.00.

Oil spearmint which is a contingent crop and usually acts along with peppermint has also turned much stronger and is being quoted on spot at the higher levels of from $1.90 to $2.15 per pound.

BISMUTH SALTS

Prices on several of the bismuth salts have been reduced sharply because of intensified competition among producers. No price change in metal was reported by principal suppliers.

The new price schedule is as follows: Bismuth subcarbonate U.S.P. 250 lb. bbls. $1.23 per pound, 100 lb. keg $1.25 per pound; Bismuth subgallate U.S.P. 250 lb. bbl. $1.35 per pound, 100 lb. keg $1.35 per pound; Bismuth subnitrate U.S.P. 250 lb. bbl. $1.13 per pound, 100 lb. keg $1.15 per pound.

Other bismuth salts remained without change but it was said that the decline may reach the rest of the group.

TARTARIC ACID

Manufacturers of this item have advanced prices 1c per pound and now quote without offer and subject to change without notice as follows: Crystal, granular or powder—barrels 23¼c per lb.; kegs net 100 lbs. 23¾c per lb. Quotations are for prompt shipment only, no contracts being entered.

CREAM OF TARTAR

Manufacturers have advanced prices for cream of tartar and now quote as follows: Powder or granular in barrels 16¼c per lb.; kegs 100 lbs. net 16¾c per lb. These prices are on the basis of prompt shipment only, no contracts being entered at this time.

VANILLA BEANS

Prices in the spot market advanced again sharply. Bourbon beans are now offered at from $4.75 to $5.50 per pound. Mexican whole beans are also quoted at from $4.75 to $5.50 and Mexican cuts at from $4.50 to $4.75. These are top prices for the movement. Although all markets for vanilla have been in a very strong position for some time it might be said that conditions have strengthened if anything. There are no indications in the situation as a whole to indicate that anything but a sellers market will prevail for some time to come.

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